THE PLAY OF MAN

BY

KARL GROOS

TRANSLATED WITH THE AUTHOR'S CO-OPERATION
By ELIZABETH L. BALDWIN

WITH A PREFACE BY
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THE PLAY OF MAN

BY

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TRANSLATED WITH THE AUTHOR’S CO-OPERATION
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EDITOR'S PREFACE

THE present writer contributed a somewhat lengthy preface and also an appendix to the translation of the author's earlier volume, The Play of Animals, mainly because—apart from the expressed wish of Professor Groos—he wanted to say something about the book. It is a pleasure to him now to have the justification for it which comes from the adoption by Professor Groos in this volume of the suggestions made in the translation of the earlier one. The main points have all been accepted and used by the author (see pp. 265, 376, 395, of this volume, for example), and further discussions of them have been brought out. This is said in view of the opinion of many that "introductions" are always out of place.

A notable thing about the present volume, considered in relation to the Play of Animals, is the modification of the theory of play as respects its criteria—a point fully explained by the author in his Introduction (see especially p. 5).

The present writer's editorial function has been confined to the insertion of various notes, and the suggesting to the translator of certain renderings; both mainly of a terminological sort (see pp. 5, 122, 133, 264, for examples). In this connection it has been found possible to anticipate and follow the recommendations made in the present writer's Dictionary of Philosophy and Psychology (now in press), seeing that Professor Groos is in active co-operation with the committee engaged upon the German-English equivalents of that work, in so far adopted here. A particular case is the group of renderings: "Preparation" (Vorübung), "Habituation" (Einübung), "Exercise" (Ausübung), all terms of the "Practice" (Uebung) theory of play. Another case is the set of terms applied to the various reactions of "Shyness"—e. g., "Bashfulness" (Schüchternheit), "Coyness" (Sprödigkeit), "Modesty" (Bescheidenheit), "Shame" (Scham), etc. Biologists will note the adoption of "Rudiment" for Anlage in its biological sense.

Intrinsically the work will be found a worthy companion to The Play of Animals, a book which has already become famous.

J. MARK BALDWIN.

PRINCETON UNIVERSITY, *February, 1901*.

AUTHOR'S PREFACE

IN this work my aim is to present the anthropological aspects of the same subject treated of in my psychological investigation of animal play, published in 1896, which may be said to have been a pioneer attempt in its department. In the discussion of human play, however, I am supported by valuable philosophical works, among which I acknowledge myself especially indebted to those of Schaller, Lazarus, and Colozza. In regard to the standpoint from which I approach the general problem of play, it is hardly necessary for me to speak at length here. It is the same practice theory on which I intrenched myself in the earlier work. The difficulties in its way, arising from our as yet imperfect understanding of human impulse life, are fully allowed for in the introduction to the first section, and I am convinced that the results attained by its adoption will, on the whole, justify the method of treatment which I have chosen.

Since it was my interest in æsthetics which first induced me to turn my attention to the subject of play, it is natural that the æsthetic phase of the question should be conspicuous in this volume. Still, I wish it to be distinctly understood that my inquiry has not been conducted solely in obedience to such leadings, nor should it be judged exclusively by æsthetic criteria. I have intentionally left many questions open for more mature consideration, at some future time, when I can give to them more thought than was possible in the year's study which I have devoted to play phenomena.

KARL GROOS.

BASEL, *December, 1898*.

CONTENTS

PAGE

EDITOR'S PREFACE iii

AUTHOR'S PREFACE v

THE SYSTEM OF PLAY—INTRODUCTION 1

PART I

PLAYFUL EXPERIMENTATION

I. PLAYFUL ACTIVITY OF THE SENSORY APPARATUS 7

1. Sensations of contact 7
2. Sensations of temperature 14
3. Sensations of taste 14
4. Sensations of smell 16
5. Sensations of hearing 18

(*a*) Receptive sound-play 19

(*b*) Productive sound-play 31

6. Sensations of sight 48

(*a*) Sensations of brightness 50

(*b*) The perception of colour 54

(*c*) Perception of form 60

(*d*) Perception of movement 67

II. PLAYFUL USE OF THE MOTOR APPARATUS 74

A. Playful movement of the bodily organs 75

B. Playful movement of foreign bodies 95

1. Hustling things about 95
2. Destructive (analytic) movement-play 97
3. Constructive (synthetic) movement-play 99
4. Playful exercise of endurance 101
5. Throwing plays 103

(*a*) Simple throwing 105

(*b*) Throwing with the help of a stroke or blow 107

(*c*) Rolling, spinning, shoving, and skipping foreign bodies 110

(*d*) Throwing at a mark 114

6. Catching 118
III. Playful Use of the Higher Mental Powers 121
A. Experimentation with the mental powers 122
1. Memory 122
(*a*) Recognition 122
(*b*) Reflective memory 128
2. Imagination 131
(*a*) Playful illusion 131
(*b*) Playful transformation of the memory-content 135
3. Attention 144
4. Reason 152
B. Experimentation with the feelings 158
1. Physical pain 159
2. Mental suffering 160
3. Surprise 163
4. Fear 166
C. Experimentation with the will 169

PART II

THE PLAYFUL EXERCISE OF IMPULSES OF THE SECOND OR SOCIONOMIC ORDER

I. Fighting Play 173
1. Direct physical fighting play 174
2. Direct mental contests 186
3. Physical rivalry 197
4. Mental rivalry 201
5. The destructive impulse 217
6. Teasing 220
7. Enjoyment of the comic 232
8. Hunting play 237
9. Witnessing fights end fighting plays. The tragic 244
II. Love Play 252
1. Natural courtship play 254
2. Love play in art 268
3. Sex in the comic 278
III. Imitative Play 280
1. Playful imitation of simple movements 291

(*a*) Optical percepts 291

(*b*) Playful imitation of acoustic percepts 294
2. Dramatic imitation in play 300
3. Plastic or constructive imitative play 313
4. Inner imitation 322
IV. Social Play 334

PART III

THE THEORY Of PLAY

1. The physiological standpoint 361
2. The biological standpoint 369
3. The psychological standpoint 379
4. The æsthetic standpoint 389
5. The sociological standpoint 395
6. The pedagogical standpoint 398
Index 407

THE PLAY OF MAN

THE SYSTEM OF PLAY

INTRODUCTION

WHILE many have undertaken, by various methods, to classify human play satisfactorily, in no single case has the result been entirely fortunate. Grasberger remarked, a quarter of a century ago, that a permanent classification of play had not up to that time been achieved,[1] and in my opinion the present decade finds the situation essentially unchanged.

Under these circumstances, I can hardly hope that my own classification will satisfy all demands, but I reassure myself with the reflection that absolute systematization is and must remain, in the vast majority of cases, a mere logical ideal. Yet even an imperfect classification may justify itself in two ways: it may be very comprehensive and practical, or its aptly chosen grounds of distinction may serve to open at once to the reader the inmost core of the subject under discussion. My special effort has been directed to the second of these uses, adopting as I do the conception of impulse life as a starting point; how far I may have attained to the first as well is for others to judge.

I consider the governing force of instinct as having been fully established in the study of animal play. In the book[2] which deals with this subject I reached the conclusion that among higher animals certain instincts are present which, especially in youth, but also in maturity, produce activity that is without serious intent, and so give rise to the various phenomena which we include in the word "play." I shall treat of the biological significance of this fact in the second, the theoretical section of this book. Here I confine myself to remarking briefly that in child's play (which, according to one theory of our subject, is of the utmost importance) opportunity is given to the animal, through the exercise of inborn dispositions, to strengthen and increase his inheritance in the acquisition of adaptations to his complicated environment, an achievement which would be unattainable by mere mechanical instinct alone. The fact that youth is *par excellence* the period of play is in thorough harmony with this theory.

An analogous position is tenable in the treatment of human play, although the word instinct, while generally applicable, is not universally so—a difficulty which is much more conspicuous here than in the classification of animal play. We lack a comprehensive and yet specific term for those unacquired tendencies

which are grounded in our psycho-physical organism as such. The word instinct does not cover the ground with its commonly accepted definition as inherited association between stimuli and particular bodily reactions. Even the imitative impulse, which is responsible for the important group of imitative plays, is not easily included in this idea, because no specific reaction characterizes it.[3] It is safer, therefore, to speak of such play as the product of "natural or hereditary impulse," although even that is not entirely satisfactory, since many psychologists connect the idea of impulse with a tendency to physical movement. There are undoubtedly deep-rooted requirements of our nature which this definition does not include, and which must be given due weight in our study of play. Thus, as Jodl, in agreement with Beaunis and others, maintains, every sensory tract has not only the ability to receive and act upon certain stimuli, but betrays itself originally through desire for their realization.[4] And if we keep in mind the tension toward special sensation, always present even in a state of comparative rest and distraction of the sense organ, as well as those external movements which are no longer the particular object of desire, we find ourselves still further from the narrow idea of instinct in relation to psycho-physical processes. In this dilemma we can only hold fast to the fact of the primal need for activity, which, while it can not, any more than the other, be included in the narrower use of the terms, has nevertheless an unmistakable relation to the life of impulse and instinct. And while it is true that mere intellectual fiat is not adequate to the establishment of such causal connections, one might be tempted, under the stress of dire need, to coin some such term as "central instinct," did not any added burden threaten to plunge the already over-weighted term into a very chaos of obscurity. The case is much the same, too, with other mental attributes. Who is to decide whether it is lawful to assume a universal "impulse to activity" (Ribot approaches such an assumption)[5] which may, according to circumstances, become now effort after emotional excitement, now desire for logical expression and the like? Or who shall pass on the legitimacy of a revival of the hereditary central-impulse theory which directs attention not to external physical movement, but exclusively to such internal dispositions as are dependent on the psycho-physical organization? Should this latter view prevail, biological psychology will have before it the task of linking an ancient idea—it was developed in Ulrici's Leib und Seele in 1866—to the body of modern science.

As it is likely to be some time yet before scientific terminology shall have attained such clearness and perfection in a sphere by no means easily accessible, that we may count on banishing all obscurity, I must content myself with the

term “natural or inherited impulse”[6] as the basis of my classification. In far the greater number of cases it is equivalent to simple instinct. But in the imitative impulse we have something which is *analogous* only to instinct, and in reference to the higher mental dispositions to activity, the term “impulse” must be expanded beyond its usual significance. I am well aware that my classification lacks precision, but I venture to think that it affords deeper insight into the problem than may be had by other means and that some aspects of the subject, not evident from other standpoints, may be brought out by this method of treatment.

The first important distinction made is that between the impulses by which the individual wins supremacy over his own psycho-physical organism without regard to other individuals prominent in his environment, and such other impulses as are directly concerned with his relations to others. To the first group belong all the manifold impulses which issue in human activity, those controlling his sensory and motor apparatus[7] as well as the higher mental dispositions which impel him to corresponding acts. To the second group we assign the fighting and sexual impulses, imitation, and the social dispositions closely connected with these. Each of these manifests its own peculiar play activity. Unfortunately, an adequate terminology here, too, is wanting, and as the opposites “egotism and altruism,” “individualism and socialism,” are not admissible in our classification, it is difficult to designate the two groups with propriety. While awaiting better names for them, I am forced to the very unsatisfactory expedient of calling them impulses of the first order and impulses of the second order.[8] To denote the playful exercise of the first order of impulses, I shall use the expression “playful experimentation,” which is already adopted in child-psychology, and also, by myself at least, in animal psychology.

As all further subdivisions will be effected without difficulty in the course of our investigation, I add here only a brief note on the general characteristics of the playful exercise of these impulses. The biological criterion of play is that it shall deal not with the serious exercise of the special instinct, but with practice preparatory to it. Such practice always responds to definite needs, and is accompanied by pleasurable feelings. The psychological criterion corresponds with it; thus, when an act is performed solely because of the pleasure it affords, there is play. Yet, the consciousness of engaging in sham occupation is not a universal criterion of play.

PART I

PLAYFUL EXPERIMENTATION

I. Playful Activity of the Sensory Apparatus

1. *Sensations of Contact*

The newborn infant is susceptible to touch sensations. Movements and loud cries can be induced directly after it has for the first time become quiet, by pinching the skin or slapping the thigh.[9] Experiments with the hands and mouth are most satisfactory, as these organs are extremely sensitive from the first. During its first week the child makes many purely automatic motions with its hands, and frequently touches its face. When contact is had in this way with the lips, they react with gentle sucking movements, and later follows the playful sucking of the fingers so common among children. It is, of course, difficult to say when such movements are conscious or when they are the result of taste stimuli.[10] According to Perez, a two-months-old babe enjoys being stroked softly, and from that moment it is possible that it may seek, by its own movements, to provide touch stimuli for itself. Here play begins. "Touch now controls. At three months the child begins to reach out for the purpose of grasping with his hand; he handles like an amateur connoisseur, and the tendency to seek and to test muscular sensations develops in him from day to day."[11]

a. We will first notice grasping with the hand as it is connected with taste stimuli. The merely instinctive movements of the first few days are multiplied and fixed, by means of inherited adaptation, progressively from the beginning of the second quarter year. The child begins by handling every object which comes within his reach, even his own body, and especially his feet, and one hand with the other.[12] In all this not only the motor element, of which we will speak later, but also the sensor stimulus becomes an object of interest, as Preyer's observation shows. "In the eighteenth week, whenever the effort to grasp was unsuccessful its fingers were attentively regarded. Evidently the child expected

the sensation of contact, and when it was not forthcoming wondered at the absence of the feeling."[13] This practice in grasping promotes the opposition of the thumb, which first appears toward the end of the first quarter, and from that time the refinement of the sense of contact progresses rapidly. At eight months Strümpell's little daughter took great pleasure in picking up very small objects, like bread crumbs or pearls.[14] This illustrates the familiar fact that play leads up from what is easy to more difficult tasks, since only deliberate conquest can produce the feeling of pleasure in success. At about this time, too, the child's explorations of its own body are extended, and their conclusions confirmed by the recognition of constant local signs. "As soon as she discovered her ear," says Strümpell of his now ten-months-old daughter, "she seized upon it as if she wished to tear it off." In her third year Marie G—— found on the back of her ear two little projections of cartilage, which she examined with the greatest interest, calling them balls, and wanting everybody to feel them. The nose, too, is repeatedly investigated. Although it is seldom large enough to be grasped, still, as Stanley Hall says, it is handled with unmistakable signs of curiosity, and often pulled or rubbed "in an investigating way."[15]

The value of the sense of touch for the earliest mental development is testified to by the fact that the child, like doubting Thomas, trusts more to it than to his sight. Sikorski says: "At tea I turn to my eleven-months baby, point to the cracker jar, which she knows, and ask her to give me one. I open the empty jar and the child looks in, but, not satisfied with that, sticks her hand in and explores. The evidence of her eyes does not convince her of the absence of what she wants."[16]

In Wolfdietrich one verse runs:

> "Die Augen in ihren (der Wölfe) Häuptern, die brannten wie ein Licht,
> Der Knabe war noch thöricht und zagt vor Feinden nicht.
> Es ging zu einem jeden und griff ihm mit der Hand,
> Wo er die lichten Augen in ihren Köpfen fand."[17]

Older children lose the habit of playful investigation quite as little as any of the other manifestations of experimentation, even when the sensations encountered are not particularly agreeable. Richard Wagner liked to handle satin, and Sacher Masoch delighted in soft fur. In later life as well, Perez continues, all the senses strive for satisfaction; when the adult is not forced by necessity to put all his faculties at the service of "attention utile" he becomes a child again. He easily falls back into the habit of gazing instead of looking, of listening instead of hearing, of handling instead of touching, of moving about merely for the sake of

sensations agreeable or even indifferent which are produced by these automatic acts.[18] We all know how hard it is for school children to keep their hands still during recitation. “I knew a little girl,” says Compayré, “who would undertake to recite only on condition that she be allowed to use her fingers at the same time, and she would sew and thread her needle while she was spelling.”[19] The knitting of women while they listen is perhaps of the same nature. Wölfflin remarks: “We all know that many people, especially students, in order to think clearly need a sharp-pointed pencil, which they pass back and forth through the fingers, sharpening their wits by the sensation of contact.”[20] Then, too, there are the innumerable toying movements of adults, such as rolling bread crumbs and the like, all of which serves to introduce a short ethnological digression. “In the year 1881,” relates the brilliant W. Joest, “when I was travelling through Siberia, ... I noticed that many of the men, requiring some occupation for their nervous hands during leisure hours, played absently with walnuts, which had become highly polished from constant use.” He saw stones, brass and iron balls, and the Turkish *tespi*, whose original use is devotional, employed for the same purpose; indeed, Levantines, who are not Mohammedans, often regard these latter as special instruments of gaming and vice.[21]

Carrying a walking-stick is another playful satisfaction in which the hand’s sensation of contact has a part, while the lead pencil, small as it is, will sometimes satisfy the demand for “something in the hand.” This is a genuine craving, which betrays itself in all sorts of awkward movements if we try to deny its indulgence. Carrying a cane is a remarkably widespread custom, and some think that the very small stone hatchets so common in ethnological museums as relics of a prehistoric time were used as cane handles in the stone age. Joest says, in the article cited above, that walking-sticks are used in millions of forms, on every continent and island of our earth. The naked Kaffir uses a slender, fragile cane of unusual length, and, according to P. Reichard,[22] his ideal of peace and prosperity is embodied in “going to walk with a cane,” since this implies freedom from the necessity of bearing arms. I close this digression with an instance which borders on the pathological. Sheridan was waiting for the celebrated Samuel Johnson, well known to be eccentric, to dine with him, and saw the doctor approaching from a distance, “walking along with a peculiar solemnity of deportment and an awkward sort of measured step. At that time the broad flagging at each side of the streets was not universally adopted, and stone posts were in use to prevent the annoying of carriages. Upon every post, as he passed along, I could observe he deliberately laid his hand, but, missing one of them, when he had got at some distance he seemed suddenly to recollect himself,

and, immediately returning back, carefully performed the accustomed ceremony and resumed his former course, not omitting one till he gained the crossing. This, Mr. Sheridan assured me, however odd it might appear, was his constant practice."[23]

b. The mouth of an infant is, of course, very sensitive to touch stimuli, and the lips and tongue are especially so. When Preyer put the end of an ivory pencil into the mouth of a child whose head only was born as yet, it began to suck, opened its eyes and seemed, to judge from its countenance, "to be very agreeably affected."[24] It happens very soon that automatic arm movements accidentally bring the fingers near the mouth, and such automatic sucking results. From it the familiar habit of thumb sucking is formed, as well as the practice of carrying every possible object to the mouth. "Your finger, a scrap of cloth, a bottle, fruit, flowers, insects, vases, objects large and small, attractive or repulsive, all seek the same goal."[25] I think Compayré is right when he says that it is not merely a case of duped appetite which Preyer points out. "The child enjoys the mere contact; it gives him pleasure to test with his lips everything that offers an occasion for the use of his nerves and muscles."[26] We find that in later life many persons like to play about the lips with fingers, penholder, etc. Many, too, who have outgrown the fascinations of thumb sucking, still lay a finger lightly on the lips when going to sleep or when half awake.[27] The pleasure derived from smoking is due perhaps more than we realize to this instinct, and the common habit of holding in the mouth a broken twig, a leaf, a stalk of grass or hay, so far as it is not practice in chewing, belongs here. In K. E. Edler's romance, Die neue Herrin (Berlin, 1897, p. 137), portraits of the extinct species of young lady are described. "In this one the lips pressed a cigarette, while in other pictures a rose stalk, the head of a riding crop, or some other object, not excluding her own dainty finger, was held against them, showing that in those days the mouth must have something to do as well as the hands, feet, eyes, and all the rest of the body."

Finally, it must be remembered that much of the enjoyment of delicate food is due to the sense of contact. When certain viands are consumed without hunger, because "they slip down so easily," we have play with touch sensations. This has something to do with the popularity of oysters and of effervescing drinks. "It tastes like your foot's asleep," said a small maiden on being allowed to taste something of the kind—a proof of the close connection with touch stimuli.

A few words may suffice in regard to playful use of touch sensations in other parts of the body. We have seen that an infant enjoys being softly stroked, and

we may assume that a soft bed is appreciated early in life. The question is, whether the child or the adult voluntarily produces such sensations for the sake of the pleasure they afford. Perhaps this is why we like to roll about on a soft bed, and more unmistakably playful is the fondness of children for throwing themselves repeatedly into a well-filled feather bed or on piles of hay, to feel themselves sink into the elastic mass. Violent contact is indulged in in many dances. In the Siederstanz, which I myself learned in the Gymnasium, the thighs were beaten with the hands. Somewhat similar, but decidedly more violent, is the Haxenschlagen of the Bavarian dances, and the ancients practised the ῥαθαπυγίζειν, an alternate striking of the foot soles on the back. A verse is preserved, written in praise of a Spartan maiden who succeeded in keeping this up longer than any one else—one thousand times.[28]

Water affords delightful sensations of touch; in the bath, of course, enjoyment of the movements and temperature is more conspicuous, but the soothing gentleness of the moist element is not to be despised. For confirmation I will cite Mörike’s beautiful verses:

“O Fluss, mein Fluss im Morgenstrahl!
Empfange nun, empfange
Den sehnsuchtvollen Leib einmal
Und küsse Brust und Wange!
Er fühlt mir schon her auf die Brust,
Er kühlt mit Liebesschauerlust
Und jaucbzendem Gesange.

“Es schlüpft der goldne Sonnenschein
In Tropfen an mir wider.
Die Woge wieget aus und ein
Die hingegebnen Glieder;
Die Arme hab’ ich ausgespannt,
Sie kommt auf mich herzugerannt,
Sie fasst und lässt mich wieder.”

“O stream, my stream in the
morning beam!
Receive me now, receive
Me thrilling, longing as I am,
And kiss my breast and cheek;
I feel already in my breast
The cooling, soothing influence
Of fresh, delicious showers
And joyous, rippling song.

“The golden sunshine rains on me
In glittering drops. Soft waves
Caress my yielding limbs,
My outstretched arms receive them
As they hasten up to clasp
And then release me.”

Here, as in all specialized pleasures, intensive emotion betrays itself. In sea bathing the principal stimulus is found in the sharp blow from the waves as they break repeatedly over one. Last of all, we notice the sensation of movement in the air. We take off our hats to let the wind play with our hair, and fanning is not always indulged in merely for the sake of cooling off, but also for the sake of the touch stimuli excited by the soft contact with waves of air.

2. *Sensations of Temperature*

There is a scarcity of material under this head, since the occasions to produce such sensations, except for the serious purposes of cooling or warming ourselves, are comparatively rare. Among the few that may safely be called playful, the most prominent is the seeking for strong stimuli for their very

intensities' sake, and because like all powerful excitation, they give us the feeling of "heightened reality" (Lessing). When we court the stinging cold of a winter day, or sit in spring sunshine to get "baked through for once,"[29] we are as much playing, I think, as when watching rippling water, or gazing at heaven's blue dome.[30] Cool air has the same refreshing effect as a cold bath, while even in a warm bath the pleasantness of the temperature sensation is a satisfaction quite apart from its cleansing and sanitary effects, and most bathers will stretch themselves out to enjoy it for a little while after soap and sponge have done their duty. Among the refinements of the sense of taste, too, the stimulus of heat and cold is conspicuous, as ices and peppermint, hot grog, spices, and spirits witness.

3. *Sensations of Taste*

Brevity of treatment is accorded to this class of sensations as well, though in this case from no lack of data.

Kussmaul's investigations[31] show that, as a rule, the child prefers sweets from its birth, and will reject anything bitter, sour, or salt, although, until the later developed sense of smell is perfected, it is incapable of more delicate taste distinctions.[32] On the whole, we find that with children such distinctions are less varied than among adults, the sweet of candy and the acid of fruits furnishing the staple material for their playful use of the sense. It is true that the pleasure which they derive from these is extreme. I well remember what unheard-of quantities of these viands were consumed at our birthday *fêtes* at school in Heidelberg, by children from six to nine years of age, not at all because they were hungry, but from mere pleasure in the taste. For we find even in children that enjoyment of eating is no more confined to the satisfaction of hunger than is æsthetic pleasure limited to the contemplation of the beautiful. When Marie G—— was barely three years old she displayed an unmistakable preference for piquant flavours; even those which were evidently disagreeable in themselves she enjoyed, trying them again and again for the sake of the stimulus they afforded—a taste which is much more common among adults than with children.

A review of the pleasures and practices of the table at various periods and among various peoples is an alluring but here impracticable undertaking. Let it suffice to cite one example from the ancients, that most celebrated of all descriptions of revelry at the board, the cœna Trimalchionis of Petronius, which W. A. Becker has made use of in his Gallus. The following will serve as a characteristic ethnological instance of the enjoyment of flavours, which are, to put it mildly, decidedly equivocal. In Java the durian tree bears green prickly fruit, about the

size of cocoanuts and with a flavour which, according to Wallace, furnishes a new sensation well worth journeying to the Orient for. The smell of it is something frightful—a cross between musk and garlic, with suggestions of carrion and "overripe" cheese. The taste is aromatic, satisfying, and nutty, like a combination of cream cheese, onion sauce, and burnt sherry. This fruit is rigidly excluded from the hotels, as its odour would instantaneously pervade every room, but it is sought elsewhere by the guests and eaten with avidity. Semon says of it: "This fruit, like our strong, rich cheeses, is detested by those who are not fond of it."[33] What various associations are connected with the pleasures of the palate is shown by the *epitheta ornantia* of a wine list, such as strong, fiery, soft, fresh, lovely, sharp, elegant, hard, spicy, fruity, and smooth. Huysmans, in his novel A Rebours, gives a pathological example of amusement derived from taste association in the following passage. After describing the life of the nervously diseased Des Esseintes, he goes on: "In his dining room was a closet containing miniature casks on dainty sandalwood stands, each one fitted with a silver cock. Des Esseintes called this collection his mouth organ. A rod connected all the cocks, and they could be turned with a single movement answering to the pressure of a knob concealed in the woodwork, filling all the little glasses at once. The organ was standing open, the register with the inscriptions of flûte, cor, voix céleste, etc., displayed, and all was ready for use. Des Esseintes sipped here and there a few drops, playing an inner symphony and deriving from the sensations of his palate pleasure like that produced on the ear by music."

4. *Sensations of Smell*

The ability to distinguish the character of odours seems to be a later development than taste differentiation. At least this is the case with regard to the enjoyment of agreeable smells. Among children of various ages experimented on by Perez, one of ten months showed some appreciation of the perfume of a rose,[34] but most children are probably first rendered susceptible to pleasure from scents by their association with flavours. Girls, however, seem to enjoy sweet smells as such more than boys do, though M. Guyan relates that he recalls vividly the *émotion penetrante* which he experienced on inhaling for the first time the perfume of a lily.[35]

With reference to adults, the same writer may be cited: "In spite of its relative incompleteness, the sense of smell has much to do with our enjoyment of landscape, whether actually viewed or vividly portrayed. No portrayal of Italy is

complete without the softened atmosphere which recalls the perfume of its oranges, nor of Brittany or Gascony without the crisp sea air which Victor Hugo has so justly celebrated, nor of pine forests without suggestions of its aroma." "The passion for smoking," says Pilo (I give this to show how complicated our apparently simple enjoyments may be), "is so general because almost all the senses are flattered impartially by it; visceral, muscular, and taste sensations are involved in the use of the lungs which it calls for, the lips, tongue, teeth, and salivary glands through feelings of temperature; the senses of taste and smell through the piquant, aromatic flavour; hearing, in a very direct and intimate way, through the crackling of the leaves and the rhythmic inhaling and exhaling of the breath; and, finally, the sense of sight in gazing at the glowing cigar and soft, gray ashes and curling smoke which winds and glides upward in a fantastic spiral; while the brain, under the soothing influence of the narcotic, enjoys a repose enlivened by dreams and visions."[36] Complete as this description appears, it yet misses one point—namely, the sucking movements which, from the recollections of the earliest months of life, we associate with pleasurable feeling. We may find the Des Esseintes of Huysmans's romance useful once more. "Wishing now to enjoy a beautiful and varied landscape, he began to play full, sonorous chords, which at once called up before the vision a perspective of boundless prairie lands. By means of his vaporizer, the room was filled with an essence skilfully compounded by an artist hand and well deserving of its name—Extract of the Flowery Plain.... Having completed his background, which now stretched itself before his closed eyes in bold lines, he breathed over it all a light spray of essences, ... such as powdered and painted ladies use—stephanotis, ayapapa, opoponax, chypre, champaka, sarkanthus—and added a suspicion of lilac, to lend to this artificial life a touch of natural bloom and warmth of genuine sunshine. Soon, however, he threw open a ventilator, and allowed these waves of heavy odour to pass out, retaining only the fragrance of the fields, whose accent and rhythmical recurrence emphasized the harmony like a *ritornelle* in poetry. The ladies vanished instantly, the landscape alone remained; after an interval, low roofs appeared along the horizon with tall chimneys silhouetted against the sky, an odour of chemicals and of factory smoke was borne on the breeze his fans now produced, yet Nature's sweet perfumes penetrated even this heavily weighted atmosphere."

5. *Sensations of Hearing*[37]

In the consideration of this important sphere of play activity we encounter one of the special problems of our subject. Since Darwin's time it has been customary

to explain the art of tone and the musical element in poetry as an effect of sexual selection. But while I am convinced that these arts do on one side bear the very closest relation to sexual life, yet I believe that Spencer is right in warning us that the exclusive reference of such phenomena to sexual selection is hardly warranted. The courtship arts of birds, it is true, are sufficiently striking, yet we must remember, aside from the fact that prominent investigators have raised serious objections to the application of the theory even to them, that birds have but a distant kinship to man. As regards our closer relatives in the animal world, Darwin himself says, "With mammals the male appears to win the female much more through the law of battle than through the display of his charms."[38] And among mammals, again, monkeys are not distinguished by any special arts of courtship. The acoustic phenomena cited by Darwin are summed up in the cry of the howling ape and the musical notes of the species of Gibbon from Borneo and the Sumatran ape described by Selenka.[39] Of other such arts, only one is noteworthy in monkeys as being also practised by man, and even that not directly in connection with love-making—namely, the disposition to display the back. It has not yet been proved that the monkey's wonderful dexterity serves him especially in courtship. The supposition has much in its favour, it is true, but finds little support from what we know of his sexual life. Brehm covers the ground pretty well when he says, "Knightly courtesy serves him little with the weaker sex; he must take by force the rewards of love." Ethnology shows us, too, that an exclusive or even a preferential reference of music and poetry to sexuality can not be assumed among primitive races. Having thus stated the doubts in advance, it may be interesting to glance once more over the psychology of play, with a view to discovering which arts and æsthetic pleasures may have arisen independently of sex. In such a review of hearing plays we are likely to find much which tends to expand and also to limit the Darwinian theory —nothing which will refute it.

Hearing plays may serve merely as a means for the satisfaction of acoustic impulses, or to give necessary exercise to motor apparatus, and, while this whole inquiry can not be said to penetrate further than to the antechamber of æsthetic perception and artistic production, an obvious distinction at once becomes apparent—namely, that between the receptive or hearing function and the production of sounds and tones. From the suckling's delight in his own guttural gurglings to the most refined enjoyment of a concert-goer, from the uncouth efforts of the small child to produce all sorts of sounds, to the creative impulse which controls the musical genius, there is, in the light of history, a progressive and consistent development.

(*a*) Receptive Sound-Play

Pleasure in listening to tones and noises shows itself remarkably early, although, as is well known, the child is born deaf. Infants but two or three days old will stop crying in response to a loud whistle, and Perez has noted signs of enjoyment of vocal and instrumental music during the first month. Preyer reports of the seventh and eighth weeks: "There seems to be a marked sensitiveness to tone, and perhaps to melody as well, for an expression of the most lively satisfaction is discernible on the child's face when its mother soothes it with lullabys softly sung. Even when it is crying from hunger a gentle sing-song will cause a cessation such as spoken words can not effect. In the eighth week the baby heard music for the first time—that is, piano playing. Unusual intentness of expression appeared in his eyes, while vigorous movements of his arms and legs and laughter at every loud note testified to his satisfaction in this new sensation. The higher and softer notes, however, made no such impression."[40] The little boy in Sully's Extracts from a Father's Diary manifested displeasure at first on hearing piano playing, but soon became reconciled to it, and his mother noticed that while his father was playing the child became heavier in her lap, "as if all his muscles were relaxed in a delicious self-abandonment."[41] Perez relates of a child six months old, on a visit to two aunts: "As the first of the young women began to sing he listened with evident delight, and when the other one joined in with a rich and melodious voice the child turned toward her, his face expressing the utmost pleasure, mingled with wonder and astonishment."[42] This seems to indicate that agreeable tones and variety of movement are at first more appreciated than is the actual beauty of the melody. According to Gurney, appreciation of melody as such first appears in the fourth or fifth year.[43] It is otherwise with rhythm. Just as ethnology shows us that from the first inception of music rhythm was more prominent than melody, so it seems that the child too, as a rule, is sensitive to rhythmical cadence even when the beauty of melody is lost upon him. The regular ticking of a watch excites lively interest in the merest infant. Sigismund says: "I have often seen three- and four-year-old children skip about when they heard enlivening band music, as if they wished to catch the time of the rhythmic movement, an impulse which indeed affects adults as well,[44] as all well know." Here we have inner imitation, the central fact of æsthetic enjoyment, displayed by the veriest babes. Children show their enjoyment of rhythm, too, in their preference for strongly accented poetry.[45] Even half-grown boys and girls take but little note of sense, compared with the interest which they bestow on rhythm and rhyme. That a normally endowed girl could interpret the words of a poem, Singing on its Way to the Sea, as Singing

on its Waiter, etc., without having her curiosity aroused, can only be explained by this fact.[46] Is it not a frequent experience of full-grown men to be suddenly struck with the profound truth hidden in some epigrammatic form of expression whose euphony has a hundred times delighted them? They have actually failed up to that time to grasp the clear, logical meaning of the verse or passage. Indifference to the words of their songs is most marked among primitive peoples, while with children an instinctive demand for some employment of their organs of hearing has much to do with their pleasure in harmony and rhythm. The following facts justify this statement: The disposition toward acoustic expression is particularly susceptible to satisfaction from sensuously agreeable stimuli, such as are responsive to harmony, melody and rhythm, partly on known and partly on unknown grounds. Here Fechner's principle of co-operation is applicable—namely, that two pleasure-exciting causes working together produce a result which is greater than their sum—and is so strong, in fact, as to extend the sphere of sound-play far beyond that of the sensuously agreeable. Absolute silence makes us uncomfortable, and, when it is lasting, conveys to the mind a special quality of emotion, as in optics there is a positive feeling of blackness. So it happens that we take pleasure in noise as such even when it is not agreeable. This applies especially to children. "Les bruits choquants, aigus, glappissants, grondant," says Perez, "ne leur sont pas désagréable de la même manière qu-aux grandes personnes." Marie G—— manifested in her third year the liveliest joy in the grinding and squeaking of an iron ring in her swing. To small boys it is a treat to hear a teamster crack his whip. My brother-in-law when a boy cherished for years the ambition to make all the electric clocks in our house chime in concert with a great musical clock. A sense of discomfort is produced sooner, however, by a variety of discordant sounds to which we are passively listening, than when the din is self-produced—a distinction which extends into the domain of art, as testifies many a piano virtuoso.

Among adults it is probably true that sound-play is either entirely or in part connected with the pleasure we derive from ringing and resonance, subject to much the same limitations as we have applied to children. Underlying it all we find, though it is not always easily recognisable, enjoyment of the stimulus as such. I would instance the cheery crackling of flames in a fireplace, the *frou-frou* of silken garments, the singing of caged birds, the sound of wind, howling of storms, rolling of thunder, rustling of leaves, splashing of brooks, seething of waves, etc. Most of these, it is true, contain elements of intellectual pleasure as well, and so through association link themselves to genuine æsthetic enjoyments.

Yet the satisfaction in mere sound as such is also unmistakably present, being most evident perhaps where strong stimuli are involved, since these have a directly exciting effect, while weaker ones, on the contrary, are soothing. Edler's romance, Die neue Herrin, gives a good instance of this emotional sensibility abnormally exaggerated. "Thomasine was exactly like a child in her dread of silence, and spared no effort to enjoy pleasant sounds, whether produced by herself or from other sources.... When her birds were silent she resorted to the music room, with its musical box and two grand pianos." This seems to confirm the idea that mere desire for sound as such is an important element in the attention given to music. The art of primitive races illustrates this as well as our own marches, dances, etc. Gurney distinguishes two methods of listening to music: the one accompanied by intelligent appreciation, the other "the indefinite way of hearing music," which is only cognizant of the agreeable jingle or harmony. I think there is a form of the satisfaction still more crude; when we note the indifference of many habitual concert-goers to fine chamber music we must infer that the power of stimulus is the principal source of their apparently absorbed enjoyment. Gurney, too, seems to recognise this elementary factor when he says: "While it is natural to consider as unmusical those persons in whom a musical ear is lacking or is only imperfectly developed, and who therefore can not at all reproduce or perhaps recognise melodies, such persons often derive extreme pleasure of a vague kind from fine sound, more especially when it rushes through the ear in large masses."[47]

Not to penetrate too far into the realm of æsthetics, we will attempt to answer but two of its more obvious questions, which, however, are by no means simple ones. Whence is derived the strong emotional effect (1) of rhythm and (2) of melody? (Some thoughts on the acoustic effects of poetry will be presented in the next section.) Rhythm may be regarded as the most salient quality of music, and seems to have antedated melody considerably among primitive peoples. While nothing is easier than to recognise the pleasure it affords, the derivation of its exciting effect on the emotions is most difficult to trace. Widely diverse theories have been advanced in the various attempts to solve this riddle. Rhythm is a conspicuous instance of the unity in variety which characterizes beauty. It satisfies this intellect, and is calculated to rivet the attention by exciting expectation. It answers to our own organization; the step, the heart-beat, breathing, the natural physical processes, are all rhythmic, as well as the alternation of waste and repair in the nervous system. But while these facts undoubtedly contribute to our enjoyment of rhythm, they can hardly account adequately for its intense emotional effects.

At this point the Darwinist comes to the rescue, and says that its employment in courtship sufficiently explains these effects, taking into account their hereditary association. He dwells on the sexual excitation which quivers in the purest enjoyment of music, and is "likely to excite in us in a vague and indefinite manner the strong emotions of a long-past age."[48] Far be it from me to discard this hypothesis hastily, particularly as I have no better one to offer, but since it appears to afford but a meagre chance of solving the problem, we may venture to seek enlightenment in another supposition. It is to be found in Souriau's system of æsthetics, which in my opinion is not yet fully appreciated. As Nietzsche has said, "As in art, so with any æsthetic fact or appearance, a physiological condition of transport is essential,"[49] so, too, Souriau insists that art employs every possible means to induce in us a semi-trance or hypnotic state, and through it renders us approachable to a degree which would be impossible when we are normally alert.[50]

Now, rhythm is to the last degree such a transporting agency, owing to its strong hold on the attention. Weinhold and Heidenhain have induced hypnosis by means of the ticking of a watch, and in so doing have only employed an agency which has similar uses the world over. Just as most of the inhabitants of the earth have learned the use of narcotics, so too are they eager to adapt such an intoxicant as rhythm proves to be.[51]

We may read numberless statements of hypnotic conditions being turned to account for religious and magical ends. Next to measured movements of one's own body, we find that listening to rhythmic sounds and the monotonous repetition of incantations is the surest key to this state of dreamy consciousness.[52] In Salvation Army methods the catchy, swinging songs are an indispensable means of eliciting the ecstatic condition, though, through the power of auto-suggestion, the expectation of the state is also strongly influential. It is the singing, however, as Souriau says, which throws the hearer into a state of mild hypnosis and renders him accessible to any suggestion.[53] When the end in view is a religious one, the ecstatic subject sees all sorts of visions, and can swear to the appearance of saints or gods. When the measure is martial in its suggestions, the subject becomes belligerent; when it excites sexual feeling, he responds in that direction; in short, his soul, being entirely under the influence of the hypnotist, will reflect, and involuntarily respond to, every suggestion. We see, then, that these intense emotional effects are only in part attributable to sound as such; rhythm is not entirely responsible for them, but figures rather as a contingent cause through which suitable suggestions act as the immediate cause

of emotional disturbances. “Hypnotism,” says Souriau, “is but a means, never an end. Art employs this means the better to control our minds and keep our imagination in the limits prescribed by her suggestions. What we owe to her is not sleep, but the dream.”[54]

This view seems to correspond with the facts. When we drum a familiar air with the fingers the regular time-beat is not at all stirring, indeed it is sometimes quite the contrary. When, however, agreeable or interesting associations are connected with it the rhythm at once induces in us a condition of the utmost susceptibility to suggestion. Any change in intensity or time then calls forth our capacity for “embodiment” (*Einfühlung*) or inner imitation in such force and completeness as would be altogether unattainable without this deep-seated propensity of ours for measured rhythm. In many cities it is customary, when fire breaks out, to ring a church bell in quicker time than its usual stroke, and by reason of the indirect factor—namely, their significance as a warning—the uniform sounds produce the most profound effect on æsthetically sensitive persons. Even those who would be unaffected by the announcement that another part of the city was in flames are deeply moved on hearing the tolling bell. The harmless tones become appalling. They seem to proclaim the destruction of the world, and the imagination dwells on the idea that nothing will be left in existence but these terrific, all-pervading waves of sound. The intense feeling aroused by drum-beats is similar to this. Since every loud sound is calculated to arouse our involuntary attention, a rhythmical succession of loud sounds irresistibly holds our consciousness, and, in the case of martial or festive music, association aids in casting the spell and, with the acoustic pulsations, forms a strong combination to which for the moment our whole being is subjected.

It is, however, when rhythm develops into melody that we experience the utmost force of its suggestive power.[55] It is interesting to see how well Hanslick describes this preliminary condition of musical enjoyment—this trance-like state—only to censure it. “The elements of music, sound, and movement hold many emotional music lovers willing captives. It is surprising how large the number is of those who hear, or rather feel, music in this way. Since they are susceptible only to what is elementary, they attain but a vague supersensuous and yet sensuous excitement, answering to the commonplace character of the music which appeals to them. Lounging half asleep in the boxes, they yield themselves to the swing of the melody without taking note of the exalted passages which may swell, yearn, jubilate, and throb with increasing appeal. These people, sitting in a state of undefined ecstasy, form the body of ‘the appreciative public,’ and do more than any other class to discredit what is best in music. Science can

now supply these hearers who are void of spirituality and seek only the effects of rhythm in music with what they need, by means of an agency which far surpasses art in this effect—namely, chloroform. It will plunge the whole organism into a lethargy pervaded by lovely dreams, and, without the vulgarity of drinking, will produce an intoxication which is not unlike its effect."[56] Hanslick is quite right in one respect: the trance condition as such is not confined to musical enjoyment; but he overlooks what Nietzsche makes so clear, that it is an indispensable physiological condition of the most intense form of æsthetic pleasure. His position is more that of the critic than that of the pleasure seeker. His saying that "the laity 'feel' music most and the cultivated artist least" shows this. First and foremost to him is his "intellectual satisfaction in following and anticipating the motive of the composition, in being confirmed in his judgment here or agreeably disappointed there."[57] The element of æsthetic enjoyment in this I have characterized, in my Einleitung in die Aesthetik (p. 187), as internal imitative creation. But the purest, highest, and most spontaneous pleasure is that in which we have no thought for the artist, but yield ourselves whole-heartedly to the beautiful object. Here is the essence of the problem, and here the condition of transport becomes most prominent, though it is never entirely wanting, even in the outer circles of æsthetics, where it becomes comparatively unimportant, as, for instance, in the satisfaction afforded us by the happy arrangement of the heads of a discourse.

In trying to find out just what it is that rhythm suggests to us in simple tones that succeed one another at agreeable intervals we may advance the hypothesis—to use a somewhat strained expression—namely, that it makes the impression of a dancing voice. By this I mean that in the enjoyment of melody there is a mental fusion of two kinds of association, one the analogue of pleasing movement in space, and the other the analogue of vocal expression of mental and emotional processes. The two are so incorporated as to produce a new entity which, as a whole, is unlike any other. The fact that we represent tone-beats by up-and-down motion in space has never been satisfactorily explained, although the greatest variety of reasons has been advanced.[58] Yet it is unquestionable that we do, and that the act is one of our most cherished mental recreations; to use Schopenhauer's expression, nothing else produces the "idea of movement" in such purity and freedom as do tone-beats. A series of tones more or less rapid, says Siebeck, can adequately reproduce the rhythm of movement "without a visible physical basis, which, by reason of its relation to other associated images, would tend to destroy the impression of movement considered purely as such."[59] On this, too, depends the extraordinary facility of tone movement, of which

Köstlin says that it “glides, turns, twists, hops, leaps, jumps up and down, dances, bows, sways, climbs, quivers, blusters, and storms, all with equal ease, while in order to reproduce it in the physical world a man would have to dash himself to pieces or in some way become imponderable.”[60] All this goes to prove that our pleasure in the realization of movement is never more perfectly ministered to than in music. Spellbound by the magic of rhythm, our consciousness repeats, voluntarily and persistently, the varying dance of tones, and, freed from all incumbrances, floats blissfully in boundless space, like Musa in Keller’s dance legend.

But melody is more than a mere alternation of tone. It is also a kind of language, by means of which the soul’s deepest emotions seek expression. While it does suggest up-and-down motion in space, at the same time it stands for the audible expression of our mental life. It would be misleading to attempt to explain this illusion from simple analogies between speech and music, since it is itself primarily a mode of expression, and we involuntarily make known our feelings and desires by means of it; by such association of tone with voice the former comes to point for us to life and its manifestations. There are, however, many points of resemblance between melody and the verbal expression of feeling. Dubos has devoted some attention to this relation, and, among contemporary writers, Spencer has most clearly set forth the analogy. But he makes the mistake of applying it to the origin of music, rather than as an explanation of our enjoyment of it, and is decidedly at fault in the statement that music originated in passionate and excited speech.[61] It can attain reflection only by means of the changing time and stress of melodic and rhythmic movement, as well as the appropriation of the numerous sounds and intervals which are hidden in feeling speech, and which take effect on the listener. Yet even this statement must not be interpreted too literally. Just as scenery often owes its impressiveness to vague suggestions of human interest, just as thunder sounds like an angry voice without being an exact copy of it, so the analogy between music and speech may be very real without their becoming identical at any point. The song of birds will perhaps best illustrate my meaning. Why does the nightingale’s note seem plaintive and that of other birds cheerful or bold? Certainly not because we know the bird’s feelings, but because there is an indefinable likeness between our own vocal expression of emotion and the bird’s song, which, in spite of its vagueness, calls forth in us the most direct response. And it is exactly so in the other case. We can not expect to change an emotional declamation into the same kind of melody simply by fixing the pitch and regulating the intervals, for melody has its own laws, to which speech is not amenable. We see, then, that though the analogy is a

real one and a constant, it must not be carried too far. How far variation of stress is concerned with emotional expression is interestingly shown in Wundt's attempt to classify temperament on this basis:

	Strong.	Weak.
Fast	Choleric.	Sanguine.
Slow	Melancholic.	Phlegmatic.

With regard to intervals, let any one attempt a mournful "O dear!" and a jubilant "All right!" in the major and minor thirds, and he will not remain in doubt for a moment as to which is the suitable one for each occasion. Gurney's experiments with children resulted in the same emotional effects when the piano was very much out of tune as when it was correct,[62] and the attempt of Helmholtz to find a physical explanation signally failed. All these facts point to the independence of the musical interval.

In concluding, I repeat that these two analogies are capable of fusion, as my figure of "dancing voice" implies.[63] If we try, for instance, to determine what constitutes the masculine, almost harsh, quality of Bach's melodies, we will find on inspection that his best arias have a variety of formal qualities of which it is difficult to say whether they pertain more to movement in space or to voice expression. There is pre-eminently a fulness of accent which imparts even to the weaker notes a certain impetus (*Béreité dích Zîón*). Moreover, his propensity to begin with two strong accents directly contiguous (*Méin gläúbiges Heize*, *In Déine Hände*), which impart to the whole a massive character from the very first, as well as the many repetitions abruptly introduced in a different pitch, and the strongly accented final syllables where again two frequently come together; all these are characteristics which tell in two directions. Here is melody governed by the laws of harmony in its forceful, clear, and irresistibly progressive movement, as well as in the expression which it gives to a purely masculine personality, full of earnest purpose and sure of himself and his aims. Only by the fusion of these two lines of association do we get at the full significance of the piece.

(*b*) Productive Sound-Play

An embarrassing copiousness of material greets us when we turn to the subject of sounds and tones spontaneously produced. In them too we recognise the beginnings of, or rather the introduction to, art. Adherence to facts requires our

classification to distinguish between vocal and instrumental music, and we will first consider voice practice and afterward the production of acoustic effects by means of other agencies, both in their playful aspects.

The child's first voice practice consists in screaming. So far as it is a merely reflex expression of discomfort it does not concern us, but it is probable that the crying of children becomes practice for the organs of speech. Discomfort may still be its first occasion, but the continuation of the cry is playful. "L'enfant qui crie," says Compayré, "a souvent plaiser à crier."[64] Children of two and three years show this very plainly; the howl begun in earnest is often prolonged from playful experimentation.[65] And the same is probably true of the customary moaning wail of women over their dead. O. Ludwig says somewhere that a woman subdues pain when she can not escape it by means of the sensuous relief which she finds in noisy moaning.

More important than crying are the babbling, chattering, and gurgling of infants, which begin about the middle of the first three months. This instinctive tendency to motor discharge produces movements of the larynx, mouth, and tongue muscles, and the child that attains now to the voluntary production of tone is fairly launched in experimentation. Without this playful practice he could not become master of his voice, and the imperative impulse to imitation which is developed later would lack its most essential foundation. From among the numerous reports of the first efforts of infants in the direction of speech we will select Preyer's very satisfactory observations: "At first, when the lall-monologue begins the mouth assumes an almost infinite variety of forms. The lips, the tongue, lower jaw, and larynx are all active, and more variously so than in later life; at the same time the breath is expelled loudly, so that now one, now another sound is accidentally produced. The child hears these new sounds, hears his own voice, and delights in making a noise as he enjoys moving his limbs in the bath.[66]... On the forty-third day I heard the first consonants. The child, being comfortably seated, gave utterance to numerous incoherent sounds, but at last said clearly *am-ma*. Of the vowels, only *a* and *o* could be distinguished then, but on the following day the baby astonished us by pronouncing the syllables *ta-hu* with perfect clearness. On the forty-sixth day I heard *gö*, *örö*, and five days later *ara*. On the sixty-fifth day *a-omb* sounded in his babbling, and on the seventy-first, at a time when he was most contented, the combination *ra-a-ao*. On the seventy-eighth day, with unmistakable signs of satisfaction, *habu* was pronounced. At five months he said *ögö*, *ma-ö-ĕ*, *hă*, *ŏ*, *ho*, *ich*. The rare *i* (English *e*) was clearer here than in the third month, and at about this time began

the loud crowing as an expression of delight. The unusually loud breathing and the clearly voiced *h* in connection with the labial *r* in *brrr-hà*, are specially indicative of pleasure, as are also the *aja*, *örrgö ā-ā-i ŏā* sounds which, toward the end of the first half year, a child lying comfortably, indulges in. To this list, too, should be added the constantly repeated *eu* and *oeu* of the French *heure* and *cœur*, and the German modified vowels *ä* and *ö*. It often happens that the mouth is partly or entirely closed by the various movements of the tongue, causing the imprisoned breath to seek any possible outlet and giving rise to many sounds that are not employed in our speech, such as a clearly sounded consonant between *b* and *p* or *b* and *d*, and also the labial *brr* and *m*, all of which evidently please the child. It is noteworthy that without exception these sounds are expiratory, and I have never known any attempt to produce similar inspiratory ones.[67] In the eleventh month the child began to whisper; he also produced strong, high, and full notes of varying tone, as if he were speaking in a language strange to us. In his monologue a vowel sound would be repeated, sometimes alone, sometimes in a syllable, as many as five times without a pause, but usually three or four times.[68] The mechanical repetition of the same syllable such as *papapa*, occurs oftener than alternation with another, as *pata*, and the child will frequently stop short when he notices in the midst of his complicated lip and tongue movements and the expansion and contraction of his mouth that such a variation of acoustic effects is being produced. He actually appears to take pleasure in systematically exercising himself in all sorts of symmetric and asymmetric mouth movements, both silently and vocally."[69]

Not to prolong this section unduly, I devote only cursory notice to the various voice plays of older children and adults, which may be said to correspond with the lall-monologue of infants and give expression to delight by shouting, whistling, yelling, crowing, humming, smacking, clicking, and the like. An example from the ancients is the "stloppus": "C'est un amusement qui consiste à enfler see joues et à les faire crever avec explosion en les frappant avec les mains."[70]

Another example, which, however, distorts the idea of play and makes it border on the pathological, is given in Boswell's Life of Johnson: "In the intervals of articulating he made various sounds with his mouth, ... sometimes making his tongue play backward from the roof of his mouth, as if clucking like a hen, and sometimes protruding it against his upper gums in front, as if pronouncing quickly, under his breath, *loo*, *too*, *too*; all this accompanied sometimes with a thoughtful look, but more frequently with a smile. Generally, when he had

concluded a period in the course of a dispute by which he was a good deal exhausted by violence and vociferation, he used to blow out his breath like a whale."[71]

Two specially interesting motives are operative in producing playful voice practice—namely, the stimulus of what is agreeable and the stimulus of difficulty—and these we will find introducing us to the formal side of poetry. The pleasurable stimulus here takes the form of enjoyment of the repetition of like and similar sounds of a particular stress. This pleasure in repetition is a remarkable thing from many points of view; on the motor side there is a tendency to use the original sound as a model for the new one (Baldwin's circular reaction), while in listening to self-originated tones and sounds primary memory is employed, that lingering of what has been heard in the consciousness which makes it possible to secure harmony of the new note with the previous one. The rhythm which we have been investigating is a simple form of such repetition, and a child will enjoy it in poetry as much as in music. At about the beginning of the fourth year children are often observed to make the attempt to talk in measure and assume the rôle of the productive artist. In general, the result is a senseless succession of words and syllables arranged rhythmically.[72] Marie G—— frequently pretended to read such jingles to her dolls. The measure most popular with children seems to be the trochaic.[73] This partiality still earlier takes in whole groups of sounds, as the mechanically measured repetition of the lall-monologue bears witness. Perez gives two good examples. "A little girl," he says, "repeated from morning till night, for fourteen days, *toro, toro, toro,* or else *rapapi, rapapi, rapapi,* and took great delight in the monotonous rhythm. Another child, nearly three years old, kept up these refrains in speaking or crying, and would take a great deal of trouble to use them in answering questions, although his parents made every effort to rid him of this vagary. For three months this little parrot continued to repeat in a loud voice the syllables, unintelligible to himself or any one else,[74] *tabillè, tabillè, tabillè*." R. M. Meyer, who sees in the meaningless refrain the germ of poetry, will find in such extraordinary persistence a confirmation of his view.[75] It is difficult to say whether there is not an inherited tendency connected with courtship in the instinctive impulse toward the gratification of such motor and sensor apparatus as is involved in this.

Be that as it may, it is undeniable that the repetition of meaningless rhymes, as well as of reasonable words and passages, is important to poetry as a whole. I would refer in this connection to Grosse's Beginnings of Art, and for my own

part confine myself to selecting a few interesting examples. The first is the chain rhyme, such as always delights a child. The following is from a favourite song of theirs:

“Reben trägt der Weinstock;
Hörner hat der Ziegenbock;
Die Ziegenbock hat Hörner;
Im Wald der wachsen Dörner,
Dörner wachsen im Wald.
Im Winter ist es kalt,
Kalt ist’s im Winter,” etc.

“Vines bear grapes;
Billy-goats have horns;
Horns has the billy-goat;
In the woods grow thorns,
Thorns grow in the woods.
In winter it is cold,
It is cold in winter,” etc.

A negative form is:

“Ein, zwei, drei,
Alt ist nicht neu,
Neu ist nicht alt,
Warm ist nicht kalt,
Kalt ist nicht warm,
Reich ist nicht arm,
Arm ist nicht reich,” etc.

“One, two, three,
Old is not new,
New is not old.
Warm is not cold,
Cold is not warm,
Rich is not poor,
Poor is not rich,” etc.

A chain rhyme which dates back to the fourteenth century has this same echoing effect, and, as Zingerle remarks, “affords a striking proof that the children’s verses of that period had the same form as our own.”[76]

A striking analogue of this is found in many poems of the Molukken dwellers. They consist of four-lined strophes, whose first and third lines form the second and fourth of each preceding one. This often results in absolutely inconsequent insertions, whose only office is to promote the echo effect and onward[77] swing, yet sometimes the thought is well sustained. Here is an instance:

“Jene taube mit ausgebreiteten Flügeln,
Sie fliegt in schräger Lage nach dem Fluss.
Ich bin ein Fremder,
Ich komme hierher in die Verbannung.

“Sie fliegt in schräger Lage nach dem Fluss.
Tot wird sie mitten im Meere aufgefischt.
“Ich komme hierher in die Verbannung,
Weil ich es wegen meiner elenden Lage so will.

“Tot wird sie mitten im Meere aufgefischt,” etc.[78]

“The dove with wide-spread wings
Flies along the winding stream.
I am a stranger,
I come an exile here.

“She files along the winding stream
And is drawn up dead from the sea.
I come an exile here,
Since that is my bitter fate.

“She is drawn up dead from the sea,” etc.

While the genuine refrain originated in the chiming in of the chorus with the other singers, this chain singing must have begun from new voices taking up the verse where others dropped it. For a last word on the subject, take this exquisite poem of Goethe’s, which combines the chain repetition with the charm of a refrain:

“O gieb vom weichen Pfühle
Träumend ein halb Gehör!
Bei meinem Saitenspiele
Schlafe! Was willst du mehr?

“Bei meinem Saitenspiele
Segnet der Sterne Heer
Die ewigen Gefühle.
Schlafe! Was willst du mehr?

“Die ewigen Gefühle
Heben mich hoch und hehr
Aus irdischem Gewühle.
Schlafe! Was willst du mehr?

“Vom irdischem Gewühle,” etc.

"O from that soft couch
Dreamily lend an ear!
Lulled by my violin's music
Sleep! What do you wish for more?

"Lulled by my violin's music
Like the spell of the starry skies,
A sense of the infinite moves you.
Sleep! What do you wish for more?

"A sense of the infinite moves you
And me to loftier heights,
Away from earth's striving tumult,
Sleep! What do you wish for more?

"Away from earth's striving tumult," etc.

When the repetition is of single letters and syllables, instead of whole sentences, we call it alliteration and rhyme. A few examples will suffice to show that both are as important to the sound plays of children as to the poetry of adults. The alliteration may be mere repetition, as even the babbling babe loves to duplicate sounds, and while sometimes logical connection of ideas is conveyed as well (Haus und Hof, hearth and home), children enjoy meaningless sound-play quite as well.

"Hinters' Hanse Hinterhaus
Haut Haus Holderholz
Hetzt Hund und Hühnerhund
Hart hinter'm Hase her."

"Meiner Mutter Magd macht mir mein mus mit meiner Mutter Mehl."

"Können Kaiser Karls' Köch
Kalbsköpf und Kabisköpf kochen?"

"Round the rugged riven rock the ragged rascal rapid ran."

"Peter Piper picked a peck of pickled peppers."

"Didon dina, dit-on, du dos d'un dodu dindon."

As an example of original production, take this composition of Willie F——'s, which he liked to recite as he pushed his wagon about the room:

"Wein, wein, wein, wein, wein, wein, wam,
Wein, wein, wein, wein, wein, wein, wam," etc.

The verse of Ennius, "O Tyte, tuti Tati, tibi tanta, tyranne tulisti," shows that adults, too, enjoy such alliteration, not only as a promoter of poetic beauty, but also for the mere play of sound.

Rhyme is often mere reduplication,[79] its agreeableness being due to the actual musical quality to which identity and variety contribute, to repetition as such, and to its unifying effect on the two words or lines concerned. Children show enjoyment of rhyme at a very early age, and as soon as they can talk often amuse themselves with such combinations as Emma-bemma, Mutter-Butter, Wagon-Pagon, Hester-pester, and the like.[80] And there are many counting out rhymes where the original meaning of the words is lost, and only the jingle remains, as:

"Ane-Kane, Hacke-Packe,
Relle-Belle, Rädli-Bägli,
Zinke-Pinke, Uff-Puff:
Das fûle, futze Galgevögeli
Hocket hinten ûff."

"Wonary, uary, icary, Ann,
Philison, folison, Nicholas, John,
Quimby, quamby, Virgin Mary,
Stringulum, strangulum, Buck!"

"Eindli-Beindli. Drittmann-Eindli,
Silberhauke, Finggefauke,
Pärli, puff, Bettel duss."
"Anige hanige, Sarege-sirige,
Ripeti-pipeti-knoll!"[81]

To regard these rhymes as the direct inventions of the children themselves would be as mistaken as to attribute folk poetry to the masses. Most songs for children originate with grown people, yet they are childish and contain only what children can appreciate, for the principle of selection decides their fate. At the same time, original artistic production is exhibited by children in alliteration and rhythm as well as in rhyme. Thus, I noticed in Marie G——, when she was about three years old, a disposition to sportive variation of familiar rhymes appearing simultaneously with the rhythmic arrangement of words. The first rhyme evolved entirely from the profundities of her own genius came to light at the beginning of her fourth year, in the shape of this strange couplet, which she repeated untiringly:

"Naseweis vom Wasser weg
Welches da liegt noch mehr Dreck."

Another child, Rudolf F——, also in his fourth year, declaimed persistently this original poem:

"Hennemäs'che, Weideidäs'che,
Sind ja lauter Käsebäs'che."

Pleasure in overcoming difficulties is an essential feature of all play. The determined onset against opposition, which is so conspicuous in play, shows how important is the fighting instinct, so deeply rooted in us all. Even in the lall-monologue, when the child accidentally produces a new sound by means of some unusual muscular effort, he intentionally repeats it (Baldwin's persistent imitation[82]). Older children playfully cultivate dexterity of articulation by repeating rapidly difficult combinations of sounds. The commonest are those where the difficulty is mainly physiological, as Wachs-Maske, Mess-Wechsel; Der Postkutscher putzt den Postkutschkasten; L'origine ne se desoriginalisera jamais de son originalité; Si six scies scient six cyprès; She stood at the door of Burgess's fish-sauce shop welcoming him in; If Peter Piper picked a peck of pickled peppers, where is the peck of pickled peppers Peter Piper picked? And many similar ones. Others require quickness of wits as well, as in these verses:

"This is the key to the gate
Where the beautiful maidens wait.
The first is called Binka,
The second Bibiabinka,
The third Senkkrenkknokiabibiabinka.
Binka took a stone,
And for Senkkrenkknokiabibiabinka broke a bone,
So that Senkkrenkknokiabibiabinka began to moan."[83]

Occasionally some obscurity in the language used involves a comic element, as —

"Basanneli, Basanneli,
Schlag 'uff und stand a Licht
Es geht a Haus im Geist herum,
Ich greif, er fürcht mich an.
Zünd's Kühele an, zünds Kühele an,
S'Lauternle will a Kälble han,
Und wie der Teig am Himmel steht,
Da schiesst der Tag in Ofa."[84]

A. Bastian relates of the Siamese children that they delight in repeating difficult sentences and alter their meaning while speaking rapidly, as Pho Pu Khün Me Pu (The grandfather near the grandmother) is changed to Pho Ku Khün Me Ku (My father near me, his mother), or Pit Patu Thöt, Pit Patu Thot (Shut the door, Shut the temple door), Mo Loi Ma Ha Phe, Phe Loi Pai Ha Mo (The floating pot bumped against the boat, and *vice versa*), etc.[85] "Negro mothers on the Loango coast," says Pechnel-Loesche, "teach their children verses which trip the tongue when spoken rapidly."[86]

A similar sport for adults is afforded by the students' song, Der Abt von Philippsbronn, in which the syllable "bronn" must be repeated four times. After the first time there is a "Pst!" sound, after the second a "Pfiff!" after the third a "Click!" and after the fourth a snore, all given as rapidly as possible. The accelerated *tempo* in the country song in Don Juan and in the wedding feast of the dwarfs in Goethe's Hochzeitslied are of the same character.

Other instruments besides the human voice are employed in sound-play. Even parrots and monkeys have found pleasure in other noises than the practice of their own voices. The young gorilla, in his exuberance of spirits, drums on his own breast, or, with even more satisfaction, on any available hollow object, such as a bowl, a cask, etc. The child's first auditory satisfaction derived from any act of his own is probably the splashing of water; another is the rustling of paper. Preyer says: "The first sound produced by himself which gave the child evident satisfaction was the rattling of paper. He often indulged in this, especially in his nineteenth week."[87] Strümpell noticed the same thing at six months, and also that it gave his little daughter pleasure to pat the table with the palm of her hand[88] (rhythmic repetition again). The boy observed by Sully was in the beginning of his eighth month when he one day accidentally dropped a spoon from the table where he was playing with it. "He immediately repeated the action, now, no doubt, with the purpose of gaining the agreeable shock for his ear. After this, when the spoon was put into his hand he deliberately dropped it. Not only so, like a true artist, he went on improving on the first effect, raising the spoon higher and higher, so as to get more sound, and at last using force in dashing and banging it down."[89] At nine months Preyer's child beat twelve times on the stopper of a large caraffe with increasing force. "On the three hundred and nineteenth day," he goes on, "occurred a notable acoustic experiment which denoted much intellectual progress. He struck the spoon on his tray just as his other hand accidentally moved it. The sound was deadened, and the child noticed the difference. He took the spoon in his other hand and struck the tray, deadening the sound intentionally, and so on repeatedly. In the evening the experiment was repeated, with the same result."[90] Possibly Preyer is right in regarding this as a sort of scientific experiment on the part of the child to investigate the causes of the deadening of the sound, but Perez thinks the child's action is accounted for by his desire to feel in both hands alternately the effect of the blow and of the shock.[91] However that may be, we are forced to agree with the German student entirely when, from these observations, he finally draws the conclusion: "The restless experimentation of little children and of infants in their first attempts at accommodation, and even their apparently insignificant acts (such as the rattling

of paper in the second quarter), are not only useful for the development of their intelligence, but are indispensable as a means of determining reality in a literal sense. We can never estimate how much of the common knowledge of mankind is attained in this way."[92]

Without pausing to enumerate the various instrumentalities employed in childish sound-play, we will leave the infant and pass on to consider the insatiate demands of our sensory organism. It seems that, in order to maintain our present life, an incessant rain of outer stimuli must beat upon us, like that atomic storm which many believe pours constantly upon the heavenly bodies and accounts for gravitation. Indeed, the opinion has been advanced, and apparently supported by some pathological phenomena, that the cessation of all peripheral stimuli marks the dissolution of psychic existence. Certainly the sense of hearing has large claims to notice in this connection—we all know the gruesomeness of absolute silence. This may be why children are so indefatigable in making noises, patting their hands, cracking their knuckles,[93] snapping and drumming with the fingers, stamping and beating with the feet, dragging sticks about, creaking and slamming doors, beating hollow objects, blowing in keys, banging on waiters, clinking glasses, snapping whips, and, in short, delighting in tearing and smashing noises generally.[94] And adults are not much behind them. These same sounds in other forms please us too, as, for example, the clinking of spurs, snapping a riding whip, rattling sabres, the tinkling of tassels and fringe, the rustle of flowing draperies. The versatile walking cane, too, comes in for a thousand uses here—in striking, beating, and whistling through the air. Going for a walk one winter day, I fell behind two worthy scholars who were deep in an earnest discussion. We came to a place where the drain beside the road was filled with beautiful milk-white ice. Crack! went the older man's cane through the inviting crust, in the very midst of his learned disquisition. The student everywhere is a past master in such sport, as his unfortunate neighbours find out to their sorrow in the watches of the night. The measured hand clapping, which the child learns so early, occurs in the dances of the people. I have mentioned the maddening rapidity of the Haxenschlagen. Enjoyment of crushing or rending destructible objects is characteristic of every age. I will cite as an example Goethe's famed boyish exploit. After throwing from a window and smashing all his own store of breakable ware, incited by the appreciative cheers of the neighbours, he descended to the kitchen and seizing first upon a platter found that it made such a delightful crash that he must needs try another. He continued the entertainment until he had demolished all the dishes within his reach. In such a case, of course, enjoyment of the sound is not the only source of pleasure. Joy

in being a cause is conspicuous when the clatter is self-originated, and sometimes renders even unpleasant sounds attractive, like scratching with a slate pencil, for instance. Besides, there is the satisfaction of impulses to movement, and often, too, the destructive impulse like that for overcoming difficulties is closely related to the propensity for fighting.

In all this we have not yet touched on the subject of acoustic playthings, and it is so large that I can only throw out a few suggestions as to the likeness between primitive musical instruments and the noise-producing toys of children. We have seen that even the ape has discovered the principle of instrumental music, and puts it to practice by pounding with his hand on a stick or some hollow object. A baby does the same thing, and will take great delight in beating persistently and with a certain regularity on a table with his hand, on the floor with a stick, or on his tray with a spoon. If we regard these sounds thus playfully produced by beating on some foreign object, together with some notion of time, as affording probably the first suggestion of a musical instrument, we are met by two possibilities: either the stick itself is considered as the source of the noise or else the object it strikes is so regarded. In the simple instruments of savages both possibilities are realized. The Australian bell is a thick, bottle-shaped club of hard wood which, on being struck, gives forth a peculiar long note, and the drum with which the women accompany the dancing of the men is only a tightly stretched opossum skin, which they have been wearing on their shoulders.[95] Stringed instruments were derived from the bow; Homer sang of the clear sound which Odysseus drew from the tightly strung bow, and Heraclitus uses a complex figure of speech involving the bow and the lyre. The South African “gora” is only a modified form of this trusty weapon of the Bushman. The modification consists in introducing on one side, between the end of the cord and the bow, a trimmed, leaf-shaped, and flattened quill, which is placed upon the lips of the performer and set in motion by his breath.

How can we explain these inventions otherwise than as the results of indefatigable experimentation on the part of either children or adults? Wind instruments no doubt arose from contracting the lips and blowing through the fist or from playful investigation of the properties of arrows and the hollow ornaments worn on the neck, while vibratory ones, like the gora, no doubt find their prototype in the blowing on leaves and grass blades, which children are so fond of. Where there is no such thing as scientific experimentation, playful experimentation becomes the mother of invention and of discovery.

While it is thus not improbable on the whole that child’s play has had much to do

with the origination of primitive instruments, we find, too, that children have borrowed many of their toys from the grown people. Things which, from the crudest beginnings, have been brought to a high degree of perfection are reproduced in miniature and simplified form for the little ones. Instances of this are too common and familiar to require illustration here. Even in remote ages it was the custom to give children little bows, wagons, dolls, etc., as well as copies of musical instruments. In the province of Saxony queer clay drums, shaped like an hourglass, have been unearthed; they must belong to the stone age, and among them is a tiny specimen, which can hardly be anything else than a toy.[96] It often happens that instruments which have entirely gone out of use among adults continue to be playthings for the children for thousands of years. This is the case with the rattles which are now the merest plaything, having no interest for grown people, except as a means of quieting an infant, yet their original connection with it was probably much closer, as our progenitors used such instruments at dances, feasts, etc., for the pious purpose of driving off evil spirits.[97] There is a widespread custom among savage tribes of frightening away the enemies of the stars by noisy demonstrations, especially during the absence of the moon. As these observances gradually become obsolete, the rattling instruments are saved from oblivion by being handed down as toys to the hospitable little people, without, however, entirely losing the glamour of their religious office. Becq de Fouquières says, in speaking of the many religious practices that are connected with children's toys: "Ses premiers joujoux dont en quelque sorte des talismans et des amulettes."[98] Many rattles have been found in the graves of prehistoric children, together with clay figures of animals, marbles, etc. Schliemann found a child's rattle, ornamented with bits of metal, in the "third city" at Hissarlik, and Squier found a snail shell filled with tiny pebbles, with the mummy of a child, in Peru.[99] Amaranthes, in the beginning of the eighteenth century, in his remarkable Woman's Lexigon, defines a child's rattle as "a hollow instrument made of silver, lead, wood, or wire, trimmed with bright coral and with little bells either inclosed in it or attached to the outside."[100] Older boys make a rattle of a dried bladder, with peas in it.

As I have dwelt on the probability of the invention of the first musical instruments by means of playful experimentation, I will now touch briefly upon another view. Karl Bücher, in his admirable treatise on Arbeit und Rhythmus, develops the hypothesis that rhythmic art is derived from physical labour. Physical labour which employs the limbs with perhaps some simple implement assumes spontaneously a rhythmical character, since this tends to conserve psychic as well as physical force. The sounds arising as the work proceeds

suggest the germ idea of instrumental music and lead to involuntary vocal imitation. Thus, poetry and music are engendered in the very midst of toil, and only later, when they attain to independent existence, are dance motions substituted for the movements of physical labour, and frequently become adaptations of them (as in pantomime dances, for instance).

Convinced as I am that this theory contains a genuine though perhaps one-sided[101] contribution to the proper explanation of rhythmical art, I am unable to concur in what Bücher regards as its logical consequence—namely, that musical instruments are adaptations of the labourer's tools. "We know," he says, "that labour rhythmically carried on has a musical quality, and since savages, having no appreciation of pitch or harmony,[102] value rhythm alone, it is only necessary to strengthen and purify the tone produced by the implement and to complicate the rhythm, in order to produce what is in their estimation high art. Naturally, to accomplish this the tools were differentiated; varying conditions, as they arose in their labours, became the occasion of further efforts for the perfecting of tone and timbre, and the art instinct, struggling for expression, first found it in such rude music. So originated musical instruments from these tools of manual labour, and it is a noteworthy fact that beaten instruments were the first to appear, and are to-day the favourites of savages. We find among them the drum, gong, and tam-tam, while with many tribes the only instrument is the kettledrum, which clearly proclaims its origin, being in many cases nothing more than a skin tightly stretched across the grain mortar or a suitable pot or kettle. Primitive stringed instruments also were struck, like the Greek pleptron, the tone of a violin and of the strings themselves being a later discovery. Wind instruments, too, are of very ancient origin, the commonest being the flute and reed pipe, both of which are rhythmic. The ancient Greeks used them first to mark time and as accompanying instruments."[103]

I hardly think that this view will meet with general acceptance. The wind instrument, whose importance to primitive peoples Bücher somewhat underestimates, did indeed serve the purposes of rhythm principally, but it would be difficult to trace its derivation from any manual tool. Nor does it follow that rattles and flappers came from the use of hammers; while the drum, whose prototype he finds in the grain mortar, is in use by tribes who have no mortars. I conclude, therefore, that musical instruments can, with more probability, be accounted for as the result of instinctive sound-play and the experimentation with noise-producing implements, which accompanies it.

6. *Sensations of Sight*

Turning his face toward the light is about the only manifestation of sight sensation displayed by the infant during his first few days. Many young animals find themselves very much at home in the outer world as soon as they are born, but such is not the case with a child. He must attain to a clear perception of external objects by toilsome experimentation, which commonly requires about five months for its completion, though the fifth week as well as the fifth month marks an epoch in the practice of sight. “The average time is about the fifth week,” says Raehlmann, “when the capacity to ‘fix’ an object is attained—that is, to take cognizance of the retinal picture of what comes within the line of his vision, as it is thrown on the macula lutea. About this time, too, the eye movements, which till then are not definitely co-ordinated, become regulated, while associated movements, such as elevating and depressing the line of vision (the latter somewhat later than the former), also appear.... But movements for the purpose of directly subjecting to fixation objects which lie in the periphery of the field of vision are entirely wanting at this period. The second epoch, that at five months, is marked by the development of orientation in the field of vision. At this time begin actual glancing movements, which shift the line of vision and bring peripheral retinal images on to the macula lutea. Contemporaneously with this, a definite system of innervations is established, especially for those muscles which are employed in shifting the line of vision. Secondly, the winking reflex is perfected by the approach of objects from the periphery of the field of vision. Thirdly, at this time the first experiments in touch controlled by sight are instituted, and serve to bring tactile perceptions into relation with those of sight. The interval between birth and the fifth week, as well as that from this time to the fifth month, is employed in the acquirement of such sense perceptions as react collectively on the organ and commit it to special uses and control. So, on the authority of repeated experience, whatever is unsuitable is gradually excluded, and only those eye movements are retained which further the proper convergence of the two retinal images.”[104] Of course, the power of vision is by no means completely developed at five months, though the technique of the function, so to speak, is by that time essentially perfected. Now begin the real tasks of visual practice: acquiring familiarity with external objects, imprinting the visual images on the mind, and widening the scope of association. On entering the subject of child’s play which is connected with vision it is evident that there are four points for us to keep in mind—brightness, colour, form, and movement. The inner images and concepts, which go hand in hand with such perception (especially with the notion of movement), do not, so far as I can see,

form part of our study, since while an effect of the highest importance they do not constitute one of the objects of play.[105]

(*a*) Sensations of Brightness

Sensations of brilliance seem to arouse feelings of pleasure at a remarkably early period. Thus Preyer says: “Long before the close of the first day the facial expression of the babe held facing the window changed suddenly when I shaded his eyes with my hand.... The darkened face looked much less satisfied.”[106] Toward the end of the first week the child turned his face toward the window when he had been placed otherwise, and seemed pleased to see it again. During the second week a child will sometimes cry when taken into the dark, and can only be quieted by having the sensation of brightness restored. Thus, we see that in the very first week there is at least a premonition of experimentation. In his second month the infant will break out into joyful cries at the sight of gilded picture frames or lighted lamps, illuminated Christmas trees or shining mirrors. Even in Wolfdietrich the delight of children in bright and shining things is recorded:—

> “Do vergaz es sînes frostes und spielte mit den ringen sîn.
> also daz kleine Kindel sîner sorgen gar vergaz,
> dô greif ez on die ringe und sprach: waz ist daz?
> des Halsperges schoene daz Kindel nie verdroz.”[107]

And it seems to grow with his growth in other directions. The following are some of Sigismund’s notes on his daughter’s third quarter: “The child is now passionately fond of light, and in the evening, when the darkening room is lighted up, she regularly shouts aloud and dances for joy.... This coincides with the fact that artificial illumination stimulates adults also to a genuine and boisterous gaiety. Our feasts and dances are always held at night, and indeed it is difficult to attain the requisite dithyrambic pitch in the daytime.”[108] Nansen wrote, when the electric light blazed for the first time on the frozen-in Fram: “What a tremendous influence light has on the spirits of men! This light enlivened us like a draught of good wine.”[109]

To what degree this feeling is universal is shown by the fact that bright and shining objects are highly prized the world over. The school child, the savage, the cultured man, display the same preference; there is no essential difference whether it is a scrap of glass for which the negro gives a generous portion of his worldly goods, or the blazing diamond coronet for which the lady in society parts with hers. That our coins are made of gold and silver is attributable to the

high polish which they take, and which won great favour for them in prehistoric times. Poets of all ages have celebrated the brightness of the human eye, and because light makes us cheerful we speak of the brilliancy of an entertainment, the beaming joyousness of the golden day. The strongest light effects are produced by flame and by the heavenly bodies. The strange attraction which flame exerts on insects, fish, and birds is familiar to all. Romanes's sister relates in the journal which she kept, about a capuchin ape, that the clever little fellow rolled strips of newspaper into lamplighters and stuck the end into the fire, to amuse himself watching the flame.[110] Primitive men must have experimented with fire in the same way when they came in contact with it in lightning strokes and volcanic phenomena, and in their earliest use of it for boring their stone hatchets. Without playful experimentation, this most important acquisition of mankind, the mastery of fire, could hardly have been attained. The little ones in our homes would find playing with fire one of their favourite diversions if we did not use every means to prevent it, on account of the danger. In spite of all warnings, the untoward fate of little Polly Flinders of nursery memory is daily becoming the experience of numberless children.

With grown people the light and glow of fire are of the first importance in both religious and secular festivities. I need only refer once more to Sigismund's saying, quoted above. The charm of moonlit and starlit nights is one of the deepest joys that Nature affords us, which only the regal splendour of sunshine can surpass. Perhaps it has never been more worthily sung than in these verses of Mörike's, which the very spirit of Shakespeare seems to have dictated:

> "Dort, sich, am Horizont lüpft sich der Vorhang schon!
> Es träumt der Tag, nun sei die Nacht entfloh'n;
> Die Purperlippe, die geschlossen lag,
> Haucht, halbgeöffnet, süsse Athemzüge;
> Auf einmal blitzt das Aug' und wie ein Gott, der Tag
> Beginnt im Sprung die königlichen Flüge!"[111]

The human longing for light is so strong that it becomes for him the natural symbol for divinity, a fact on which we have not time to dwell, except to note the significance of the heavenly bodies and of fire in religion. The self-devised Nature worship of young Goethe, who greeted the rising sun with an offering, is interesting, and still more so is the statement of the deaf-mute Ballard that, as a boy of eight years, he arrived by his own unaided efforts at some sort of metaphysical and religious thought, and felt a kind of reverence for the sun and moon.[112] This is the effect of light which has so great a part in the mythology of all peoples. Even in the Old Testament account of the creation light is the first

thing which God called out of chaos. “And God saw that the light was good.”

We find brightness of aspect especially affected in the industrial arts and in painting, and the employment of shining and glowing substances in decoration is too familiar to need comment. They are found in the ornaments of the Stone period, such as necklaces of animals’ teeth, bits of ivory and shells, as well as among savage tribes of the present day. Grosse says: “The ornaments of these people may be called brilliant not in a figurative, but in a literal sense, and there is hardly any quality which contributes so much to the decorative effect of an object in savage estimation as brightness. The natives of Fire Island frequently hang fragments of a glass bottle on their neck band, considering them very superior adornments, and Bushmen are happy when they are made the proud possessors of iron or brass rings. However, they are by no means dependent on such windfalls from a higher race, and when the ornaments of civilized man and barbarian are both wanting and precious stones are not available they betake themselves to Nature, who can well supply their needs. The sea tosses up polished shells upon the beach, vegetation furnishes bright seeds and shining stalks, and animals give their shining teeth, as well as fur and feathers.”[113]

In painting, light effects in connection with colour are of the greatest importance, and are skilfully managed by many masters of the art. Rembrandt may be said to possess the highest genius for their treatment. Without going into particulars of technique, I may note that the pleasure which we derive from light effects in painting may be referred to two opposite extremes. We know that it is out of the question for the painter to transfer to his canvas Nature’s extremes of light and shade, only about half of the eight hundred ascertained degrees of brilliancy being available to him.[114] Helmholtz has shown in an interesting manner how the artist may triumph over this difficulty. It proves to be a special case for the application of Weber’s law; the adjustment of intensities is not in proportion to the actual force of the stimuli, but to their relative force. Thus, when the painter tempers the brilliance of Nature he actually gives a more faithful representation, because the toned-down light against the deepened shadows of a picture produces the same effect on the senses as the clear beams of sunlight in contrast with its luminous shadows.[115] This so-called normal technique is objected to on diametrically opposite grounds. Some painters, refusing to darken and falsify Nature, seek to make their shadows as bright as are those in the diffused light of day. As it is impossible, however, to represent the actual intensity of the light, their attempt to reproduce the actual is only half realized. The true contrast between light and dark fails, and the result is the faded, obscure, hazy

appearance which characterizes the work of extremists of this school. In the other direction the attempt is sometimes made to darken the shadows so excessively as actually to make the difference between light and shade greater than it is in Nature. Caravaggio and Ribera, Lenbach and Samberger, furnish examples of this kind of painting. Their work is done on the principle of darkening the shade, in order to bring out the light more sharply; eyes, brow, and hands in their pictures seem to surpass the clearness of Nature because of this difference, which is greater than that of reality. These artists are true lovers of light.

(*b*) The Perception of Colour

The exact period in a child's life when susceptibility to colour impressions arises has not been determined. Preyer's son seemed interested in a rose-coloured curtain, with the sun shining on it, on his twenty-third day,[116] but who knows whether it was the colour that pleased him or only the brightness? And the same doubt hangs over a hundred other observations taken in the first months of life, as, for example, this of Sully's: "Like other children, he was greatly attracted by brightly coloured objects. When just seven weeks old he acquired a fondness for a cheap, showy card, with crudely brilliant colouring and gilded border. When carried to the place where it hung, ... he would look up to it and greet his first love in the world of art with a pretty smile."[117] Since we can not be certain that it was not the mere brilliancy which produced this effect, Sully is quite right when he says: "The first delight in coloured objects is hardly distinguishable from the primordial delight in brightness."[118] Raehlmann thinks, however, judging from the child's positions and actions, that one can—though not till considerably later than the fifth week—be sure that it perceives a difference between objects of similar form and complementary colour.[119] And it is probably quite safe to assume that there is pleasure in gay colours by the end of the first three months.

Here we are met at once by the question, Does the child prefer any particular colours? Most observers agree that the child displays more interest in the warm colours—red and yellow—than in the colder ones.[120] Baldwin, on the contrary, found from his experiments with a baby nine months old (not using yellow, however) that blue was chosen oftenest.[121] Although Preyer denies the validity of Baldwin's experiment, it seems to me quite possible that here, as well as elsewhere, there is room for the manifestation of individual preference.[122] The choice of yellow and red can hardly be a necessary one. For example, I find Grosse's rule, that children will always empty the vermilion cup in a paint box

first and will, when allowed to choose, always take a flaming red, by no means invariable. Marie G—— (five years old) turns oftener to the blue in her paint box than to the red. She herself pointed out lilac as her favourite colour, and weeks before my question she persisted in using bits of lilac silk in her embroidery, though her mother had taken them away from her. Having chosen the lilac, she however added, after a pause for reflection, “Red is pretty, too.” Another little girl, Deti K——, at the same time answered the question as to what colour she liked best, “Lilac too, but bright.” Still another named first lilac, then rose, and after these red and yellow. I consider it not improbable that in many children of fine sensibility the stimulus of crude red and yellow is too strong to be particularly agreeable. This supposition perhaps explains the exceptions to the rule, and also seems to interfere with the likening of children to savages, which was formerly so useful. Observations of the children of such tribes have never been made, to my knowledge.

Before going on, however, to consider the case of savages, we must look briefly into the problem suggested by the fact that there is choice of any colour. The child’s susceptibility to the cooler colours, and even its perception of them, especially blue and gray, has been questioned. Preyer says: “The inability of my two-year-old child to recognise blue and gray can be argued not only from his occasional failure to do so, but also from the evident difficulty he encounters in connecting the commonly used and familiar names ‘blue’ and ‘gray’ with any special sensations, while ‘yellow’ and ‘red’ were correctly applied several months ago. Were the sensations of blue and gray as clear as those of red and yellow there would be no failure to recognise the colours. The child does not know what green and blue mean, though he does know red and yellow.... Even at four years blue was oftener called green in the morning twilight, though to me it was clearly blue. The child was greatly astonished to find that his blue stocking had become gray overnight. For years very dark green was called black.”[123] These striking observations seem indeed partially to confirm the hypothesis of Geiger, Gladstone, and Magnus, who came to the conclusion, from the study of ancient picture writing, that primeval man distinguished only the three primary colours (the Young-Helmholtz theory)—red, green, and violet. From these were derived orange and yellow, while blue was the very last to be discovered. Yet, indeed, so far as any philological support is concerned, the hypothesis can hardly be maintained either in regard to the ancients or to modern low-standing tribes.

In the remains of buildings and plastic works, which are older than any picture writings, traces are found of all the colours of the spectrum, and the philological test, when applied to civilized peoples, does not yield the confirmation which

advocates of the theory desire. While it is true that the Esthonians have no word of their own for blue (their *sini* is borrowed from the Russian), but the apparent deduction from that fact is rendered doubtful, to say the least, by this passage from Raehlmann: “Some time ago I tested an old Esthonian peasant woman with a gray starling. She was not quite sure of the name of the colour, and changed it often. On closer questioning about her ideas of colour, she seemed to have the spectral series correctly in mind, distinguishing the colours as blood, wax, grass, and sky. She had never needed other terms with which to express her sensations, but she took pains to convince me that she had perfectly clear ideas on the subject of colour.”[124]

But how is it with the savage tribes? Here we find, indeed, that for the painting of their bodies, as well as for other ornaments, the warm colours are almost exclusively chosen. Besides black and white, hardly any other colours than red and yellow are found at all. “The Australian has always, in his bag of kangaroo skin, a supply of white clay and of red and yellow ochre. For ordinary occasions he contents himself with dabs on cheeks, shoulders, and breast; on holidays he paints his whole body.”[125]

Bushmen rub their faces and hair with red ochre; red is the Fire Islander’s favourite. Other savages use, with deep blue-black, a blazing vermilion, a combination which imparts to their faces the wildest and most forbidding expression. Among the famous discoveries which Fraas has described so well[126] was a lump of kneaded paste about as big as a nut, compounded of iron rust and reindeer fat, and intensely red in colour. Probably every huntsman of the Ice period had one of these to colour his body with. The same colours are chosen for their other ornaments as well. The Australians stripe their girdles and neck and brow bands with red, white, and yellow, and the same or similar colours are in demand with the Bushmen and Fire Islanders. Among the Botoku red feathers, as the most costly decoration, form the insignia of rank. Others wear yellow feathers in the hair, and the same ornament floats above the brow of the Australian hunter. The cool colours are scarcely ever seen in primitive ornamentation, even in combination with red and yellow. Blue decorations are extremely rare, and the Eskimo’s lip wedge of green nephrite is quite unique in colour.[127] From this brief survey we reach the conclusion that primitive man is not so sensitive as we are to the stimulus of the colder colours. In the painting of the body and some other ornamentation the prevalence of red and yellow may be partly attributed to the more general distribution of these pigments, but such a reason can not be assigned in the case of feathers, and we can not therefore deny

the probability that for the savage simple green and blue lack the charm which they possess for the cultivated eye.[128] That the cooler colours are imperfectly perceived, however, is an unwarranted supposition in the provisional stage which our knowledge of the subject has up to the present time attained.[129] With them, as with children, probably the cooler colours fail to arrest their attention and excite their interest as they do ours. Whether this is the result of a kind of colour blindness or whether it is due solely to the intensive emotional effect of the warm colours it is difficult to say. The extraordinary want of susceptibility to reflected colour displayed by educated adults proves that the lack of æsthetic interest may assume the form of partial colour blindness. There are thousands, for example, who have never noticed the intense blue of a shaded cement road under a clear sky, although they may have seen it a hundred times. And they will complain bitterly of the gross inaccuracy of a picture which faithfully reproduces what is actually before them.

We may not dwell on the pleasure that is derived from colour in natural scenery, in ornament and in clothing, in the arts and industries, for the theme is practically inexhaustible, and we would hardly have space for even the baldest enumeration of its leading divisions. It would, for example, be well worth while to trace the historical development of the various standards of taste in such matters, to which this pleasure has at different times conformed. The special emphasis given to colour in the last decade has deeply influenced our poetry, and is characteristically illustrated in the writings of Jacobsen and G. Keller. The following passage from Martin Salander could hardly have been written in any century before the present one: “The setting sun, whose level rays shone through the handsome dining room, glittered on the golden lining of a large beaker, which stood before him, freshly filled with ruddy wine. The yellow gleam shot with indescribable beauty through the heart of the rich red transparent fluid. Martin raised his eyes from the glowing colour picture, which, coming direct from the open sky, was like a flaming seal for his thoughts. A sprightly lady sitting opposite him noticed that a rosy shimmer from the cup spread over his animated face, and begged him to sit still, for he looked beautiful. Flattered, he kept his face unmoved while the reflection vibrated with the wine in the cup, for a slight tremor ran along the table and disturbed the contents of the cups.” It is interesting, too, to note that boys concern themselves much less about colour than girls do, and yet the history of painting seems to show that the masculine sex has a finer colour sense than the feminine. This is probably explained by the fact that boys early develop the fighting instinct, and the active motor side of their nature keeping perceptive play activities more in the background, without

necessarily depreciating their inborn capacity for enjoyment of colour.

I now turn to the subject of play with colour, as it is practised by adults. In his classification of the arts Kant has, strangely enough, inserted a colour art besides painting, because he looks upon the latter as pre-eminently linear. As a matter of fact, there are several colour arts. Such, to a certain extent, was the glass tinting of the middle ages, which resembles æsthetic tapestry weaving more than it does painting. Pyrotechnics, too, produce very lively enjoyment by means of the play of light and colour, and finally we have that modern invention, the serpentine dance, which seems to be quite near to music in the direction of sensuous gratification, while far below it as a means of intellectual expression. Those modern painters who strive only to impart colour-tone and harmony, to make the effect of their pictures resemble that of music, are far surpassed by the serpentine dance (a fact which is sufficient to prove that such an aim is mistaken). Here is actual rhythmical movement, ecstasy terminating in itself, waving and attenuation as of tone, and, above all, the thing that moves us so, the succession of glowing colours on a dark background, whose intensity takes hold of the beholder's soul as only the noblest of musical instruments or perfectly harmonious voices can.

(*c*) Perception of Form

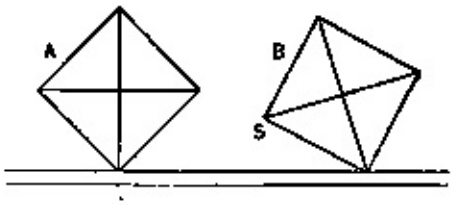
Recognition, the first requirement for reproduction, is dependent on perception of form. Later, in considering mental experimentation, I shall return to this subject and treat it more fully. Here I will make only the general statement that the visible form of objects is of higher biological value to the exceedingly important faculty of recognition than is colour or brilliancy. Evidently the child has a very special interest in form, or he could not without great effort distinguish the meaning of simple outline at the relatively early age when we find him doing so. It is remarkable how indifferent little children are to gay colour in pictures. Konrad Lange has treated the subject exhaustively in his well-known book, and Sigismund says: "I can not affirm that there is any preference for coloured pictures at this age (two years). When I laid before the child copies of the same picture done in colours and in black and white he seemed to regard them with equal pleasure."[130] This indifference is displayed, too, by children who take the liveliest interest in a gaudy ribbon or bright flowers; therefore it seems to me probable that the child is so concentrated in the apperception of form that he has no attention left to bestow on the colour—a legitimate argument for the importance of form in recognition. Very striking, too, is the child's extraordinary capacity for illusion in the observation of form. When Souriau

says, “Regarder un dessin, c’est voir des chimères dans les nuages,” he rightly adds that it applies with special force to children.[131] “Mere outlines,” says Sigismund, “serve for any object of that general shape. My little one calls a square a bonbon, and a circle a waiter.”[132] Preyer’s son called a square drawn on paper with a red pencil a window, a triangle was a roof, and a circle a ring.[133] All this goes to show how strongly the child’s interest is concentrated on the apperception of form.[134] Such a capacity for illusion often has notable results. Thus Marie G——, when three years old, saw a painting which represented the early morning just before sunrise, and asked me to turn the picture round to see if the sun was on the other side.

Recognition and illusion are two of the threads from which the complex web of æsthetic enjoyment is woven. When the child begins to take pleasure in form it is difficult to say, and more difficult still to determine, when the æsthetic personification, which is so important to adults, arises. Experiment may, however, throw some light on both questions. Marie G—— was five years old when I first attempted something of the sort with her. I showed her a straight line, and near it an irregular one, and, in order to excite her interest, told her that I wanted to keep one of them and was in doubt as to which it should be. She pointed at once to the straight one—“I should keep that.” Well-drawn equilateral triangles were preferred to irregular ones, but she gave a characteristic reason for

choosing the uneven quadrilateral instead of a perfect rectangle—because, she said, it looked like a hat. Here the less pleasing form was preferred for the sake of its meaning; she was still quite clear in her idea of regularity. She asked me, for instance, to draw “some straight figures and some of the other kind.” By straight she meant regular—she called a perfect circle straight. We thus find in a child the æsthetic rule operative—namely, that formal regularity is agreeable. Personification of the figure by children is also a subject for experimentation. German students of æsthetics found out long ago that the object of our enjoyment is endowed by our imagination with personal attributes analogous to our own. “We conceive of all natural objects,” says Wölfflin, “as analogous to our physical organism.”[135] One of the first requirements of our organism is that it shall maintain its equilibrium, and accordingly an elementary fact in our personification of natural objects is that a distorted figure causes us an unpleasant feeling of disturbed equilibrium. I showed the five-year-old Marie G—— these two figures, and asked which she would rather have. Unhesitatingly she pointed to A. “Why?” I asked. “Because it stands on the point.” “But the other one stands on its point too.” “Yes, but this” (pointing to the angle *S*) “is so low.” She played with the squares, and turned

them so that they rested on the horizon line. “Now they hang down,” she said; “but this one” (pointing to B) “is just willing to come down.” That the child at play personifies all possible objects is a familiar fact, and we here find that they can conceive of even abstract figures according to physical analogies.



Savages manifest pleasure in form, more particularly in their ornamentation. It was formerly believed that creative imagination was responsible for some of their geometric patterns, but lately this idea has more and more given place to the opinion that all their patterns, without exception, are the product of imitation. The reports of Ehrenreich and von den Steinen of the tribes of central Brazil go far to confirm this view. With them animals almost invariably furnished the models, their forms being reproduced in a conventionalized manner. Thus a zigzag was derived from the markings of a snake, the cross from those of a lizard, etc.[136] It is possible that this theory attempts to prove too much, for basket work may well account for some patterns which it would be difficult to find in Nature.[137] This possibility being once granted there is no convincing proof that natural models were used in the construction of conventional figures at all. Often the resemblance may have been an afterthought, as a child calls a square a window, though it may have been drawn with no such intention, or the Eskimo explains the peculiar outlines of his characters by likening them to animal forms. However this may be, it is at least certain that these savage people offer a convincing proof that the pleasure which is derived from form is primordial and universal. If geometric figures did originate in imitation of natural models, still the persistence and abstract conventionalizing of them points to a high valuation, which is in one case at least independent of such accidental association—namely, when ornamentation is applied to tools and utensils, and especially if we consider their fine polish and symmetrical form as belonging to the order of embellishments. “Smoothness and good proportion,” says Grosse rightly, “are usually not so much æsthetic as practical qualities. An awkwardly shaped weapon does not reach the mark as surely as does a symmetrical one, and a well-polished arrow or spear head penetrates farther than a roughly finished weapon. Yet we find among primitive people articles which have just as much care bestowed upon them, without any such evident utility. The blubber lamp of the Eskimo need not be either so regular in form or so highly polished in order to shed its light and heat; the Fire Islander’s basket would no doubt be quite as useful were it a little less evenly woven. Australians always carve their talismans symmetrically, though, for all we know to the contrary, they might be just as effective otherwise. In all such cases we may be

sure that the workman is satisfying an æsthetic as well as a practical demand."[138]

Since we can devote but a passing glance to the significance of form in the art of cultured man, I confine myself to some remarks on the æsthetic effect of the simplest of all forms—the straight line. Fr. Carstanjen, in his interesting paper on the developmental factors of the early renaissance in the Netherlands,[139] advances the opinion that progress and development in art are the direct result, psychologically speaking, of dissatisfaction with contemporary art and its productions with which the people have become satiated. As concerns the evolution of form, the common process seems to be that, by a naturalism more or less fortunate, something like style is first acquired by means of the mastery of straight lines. From this point development is in the direction of overcoming their stiffness and angularity. The representation of form is constantly more free, reaching thus a high degree of beauty, but passing on through a period of extravagant exaltation of circles, spirals, swells, and curves to final and inevitable decadence. In following out this succession of styles it becomes apparent that separation from the direct is, æsthetically speaking, separation from repose (as well as from stiffness). So Wölfflin says, in pointing out emotional analogies as they bear on form: "A line composed of short, delicate curves is commonly called tremulous, while one with wider and shallower vibrations indicates dull humming or buzzing. A zigzag rustles and splashes like falling water, and when very pointed sounds shrill like whistling. The straight line is quite still; in architecture it suggests the quiet simplicity of the antique."[140] It is a most interesting study to note the almost illimitable force of this effect of the straight line in an art which, having reached the pinnacle of its development, allows full swing to the tendency toward rounded forms as well. During the most flourishing period of the Italian renaissance there was scarcely a single master who gloried more in the pride of sensuous loveliness than did Titian, yet even in the midst of his intoxicating triumphs he attained something of that quiet grandeur which, according to Winckelmann, formed the basis of Greek art. How can we account for this? In my opinion it was accomplished, in part at least, though not entirely, by the use of the short straight line which characterizes Titian's style, and is repeated in the work of many of his imitators —I mean the line that is formed by the peculiar inclination of the head. It is found in the wonderful Madonna of the house of Pesaro, in the Flora of the Uffizi, the Laura de Dianti in the Louvre, in the so-called "Loves" and other works of the master. Their chief common characteristic is a certain commanding dignity impossible to describe. Among those artists influenced by Titian, Moretto has followed him most successfully.

This same line may become almost unpleasing when the figure is too much in profile and the head bends forward, as does Mary Magdalene's in Titian's Dresden Madonna. I mention this because it is repeated in the Medea by Feuerbach, who is very faithful to Titian's ideal. He is, moreover, one of the vanguard of German artists who are leading the way to the new idealism—a thing as yet more hoped for than realized. And just here I have a word to say. An essential of ideal art is that, as opposed to naturalistic reproduction, it *plays* with conventionalized form and subordinates reality to it. While at the height of the renaissance marvellous effects were achieved by mingled and contrasted curves, such as astonish us in the work of Raphael and sometimes of Rubens, of our modern idealism we may say: if we are justified at all in calling its developments new, it is because, from the standpoint of form, it does possess one unique and original characteristic—namely, that in it for the first time straight lines, and especially the perpendicular, are dominant in a well-mastered technique, which is no longer primitive. There are many traces of this principle in Feuerbach's work, and it is still more strikingly shown in that of Böcklin, who has close kinship with the Venetians. The tensely upstretched necks of the swans in the Island of the Blest is a perfect example of the new style. It comes out again in the stiff little trees of his spring landscape, in the abrupt lines of the drapery of a Muse at the Arethusan spring, in the perpendicular line extending from the shoulder of the musical shepherd boy quite to his foot, and in many other pictures. Max Klinger is partial to the horizontal, and much of the characteristic power of his Pieta is due to his employment of these lines; three stone steps, the outstretched body of the Redeemer, the stretch of a wall in the background, the straight lines of a thick wood, in contrast to these the upright half figures of John and Mary. Many of our modern idealistic painters have unfortunately abandoned the use of this "line of Praxiteles," which imparts so finely poised a position to the head and body and that peculiar mysterious dignity and air of detachment to the whole figure—"schöne, stille Menschen." In the industrial arts this preference for straight lines is most conspicuous in what we wish to appear as new and original, and even in the newest styles for men it gives us the creased trousers, the waistless coat, and the stiff, high hat. These phenomena, however, we will not presume to attribute to the influence of ideal art.

(*d*) Perception of Movement

When sight is the medium of perception movement plays are at the same time visual plays, otherwise consciousness is reached through the sense of touch. We will here give special attention to experimental exercise of the motor apparatus,

as actual movement play is treated of in detail in another section. After some general remarks, a few cases will be cited whose most important feature is the pleasure derived from the contemplation of the movement, as is especially the case when it is not self-produced. The powerful attraction which movement has for us is well grounded biologically, for evidently it is of the utmost importance in the struggle for existence that attention should be at once and instinctively aroused by any stir or change in the environment.[141] But perception of movement by means of the eye alone, and consequently the instinct of keeping absolutely motionless, is of great importance to the pursued animal. Thus Edinger says: “I have repeatedly seen a hungry snake pause in the midst of his pursuit of a fleeing mouse, when it crouched down and was quiet. I have seen it recoil from the frog, which it was trying to catch, as soon as the creature kept still.”[142] Even our own involuntary attention to motion has some analogy to instinct, and recalls the violent and sudden reaction with which we respond to an unexpected touch on the bare back.[143] As a matter of psychological fact, there is associated with movement, as with sensations of hearing, a strong emotional effect.

It is no wonder, therefore, that all his life long man shows a peculiar interest in movement, and acquires the capacity to detect its intimations very early in life. Indeed, this capacity is one of the first to be developed, and depends, apart from skin stimuli and the so-called after images which reveal objective movement to the eye at rest, principally on the ability to follow the moving object with the glance. Practice is necessary for the mastery of this capacity. The eyes accompany, in addition to the regular objective motion, a constantly renewed backward movement as well, by means of which we again grasp the escaping object, an effort requiring the simultaneous exercise of volition and attention. “This process requiring continuous and constantly renewed attention,” says L. W. Stern, “this lying in wait that the object may not give us the slip (for any laxity would at once be avenged by an increased difficulty in fixing the object), bears witness to a condition and teaches us that the object with which we are carrying on this game of ‘catcher’ is in motion.”[144] This explains why little children so easily lose sight of a moving object which they wish to follow with the eye.

Here again we find that playful experimentation is essential, and, according to Raehlmann, it commonly appears toward the end of the fifth week, rarely earlier.[145] That Preyer’s boy on the twenty-third day followed with his eyes a slowly moving light was probably an instance of forced development, as a result

of much experimenting. On the twenty-ninth day the same child crowed aloud at the sight of a swaying tassel. On the sixty-second day he gazed at a swinging lamp with constant manifestations of delight for nearly half an hour, but his eyes did not follow the swing of the pendulum; they moved, it is true, now left, now right, but not in time with the lamp. “On the one hundred and first day a pendulum making forty complete swings in a minute was for the first time followed with mechanical exactness by his glance.”[146] As his capacity for following the movement increased, the greater his interest in it became. A dog racing away or leaping about the child, the fast horse, the hopping toad, the crawling worm or gliding snake, running water, leaping flame, a rolling wagon, and, more than all, the fast-rushing train, with its cloud of steam—all these excite a really passionate sympathy. The smoke of a cigar, too, gives great satisfaction, and if a father knows how to make the beautiful blue rings he must at once renounce his peaceful contemplative enjoyment of his own play, for the youngster will demand a very different *tempo* in the repetition than is agreeable to him. In enumerating instances of animal motion I omitted one because it deserves more extended notice—namely, the flight of insects, in which children take such lively interest. The common illusion that an insect which has been caught can be induced to fly away by the recital of a form of words is highly interesting, in itself considered as well as in view of its probable origin. May not such poetic formulæ be traceable to a religious or at least superstitious origin? The commonest of these rhymes are those addressed to the ladybird (*Coccinella septempunctata*) and the June bug. Rochholz has made a collection of the names of the former, and found that in India it was sacred to the god Indra, and among the old Germans to Frega. I give two German forms of the verse:

“Muttergotteshühle, Mückenstühle,
Fliege auf, fliege auf! Wohl über die Bussenberg,
Dass es besser Wetter wird.”

“Marienkäferchen, wann wird Sonne sein?
Morgen oder heut?
Flieg weg in den Himmel!”

An English one is:

“Ladybird, ladybird,
Fly away home;
If you’ll be quick,
The sunshine will come.”

All are familiar with the adjuration to the June bug. French children sing:

“Hanneton, vole, vole!
Ton mari est a l’école,
Il a dit qu’si tu volais,
Tu aurais d’la soupe au lait
Il a dit qu’si tu n’volais pas,
Tu aurais la tête en bas.”

To the butterfly, which is not so easily caught, the invitation is to alight:

“Molketewer sett di,
Kömmt e Pogg de frett di!”

And in Scotch:

“Le, la, let,
My bonnie pet!”

The snail, too, is addressed in a rhyme which favours the illusion that he will put out his horns to order:

“Schneck’ im Haus, kreich heraus,
Strecke deine vier Hörner heraus!
Sonst werf ich dich in Graben,
Fressen dich die Raben.”

“Snail, snail, put out your horn,
Or I’ll kill your father and mother the morn.”[147]

As a final example, I will mention the gruesome custom which, according to Papasliotis, obtains in modern Greece, and especially in Crete, of attaching a small lighted taper to a beetle and releasing it amid the acclamations of excited children. A passage in Aristophanes gives the impression that the children of ancient Greece also indulged in this cruel sport.[148]

The eye of the adult, too, delights in movement; absolute immobility is as disturbing as absolute stillness. Here, as elsewhere, in considering the playful indulgence of sensuous perceptions, we must distinguish between pleasure in movement as such and pleasure in sensuously agreeable movement. Even children seem to exhibit this difference. Some weeks after the experiments in form described above I drew irregular zigzags and some even, wavy lines in the air before Marie G——, then five years old, and asked which she liked better. She chose the latter, though the others were calculated to produce a much more exciting impression, giving as her reason that the wavy lines were “straighter”; evidently meaning, as in the case of the figures, that these were more regular. In adults susceptibility to sensuously agreeable movement is doubtless still stronger, yet with them, too, there is a wide margin of pleasure in movement as such. From the multiplicity of available examples of this I select first the

observation of street scenes, which I have already noticed in the case of animals,[149] especially the dog. The pleasure which we find in gazing out of our own windows or from behind the plate glass of a *café* at the bustle and swarm of a city's traffic detaches itself from all intellectual or even imaginative associations, and is gradually merged into a dreamy consciousness of a sensation of movement, mingled with mild enjoyment of its contrast with our own repose. With similar sensations we observe the stir of an ant-hill, the swarming of gnats in the evening glow, the confusion of snowflakes, and the whirling of leaves in a wind. A special interest attaches to the witnessing of skilful acrobatics where the feeling of inner imitation is strongly excited, and well does the juggler know how to turn this interest to account. The dexterous leaps which Amaranthus records at the beginning of the eighteenth century furnishes us an historical example: "Many are the leaps by which the jugglers cause the money of the spectators to jump into their own purses, and they have names as strange as they are ridiculous. There is the monkey jump, which throws one backward, landing him on both feet; the trout leap, which does the same thing twice in quick succession and with the legs crossed; twenty-two monkey jumps without stopping; a great variety of table and board jumps; the goat and hare leaps; the leap through eight rings, one from floor to ceiling, over chairs, etc."[150]

The enjoyment is of course strengthened when the already interesting motion becomes sensuously agreeable; a low degree of such pleasure is experienced in witnessing regular motion in a single direction, such as that of a rushing stream or of clouds sailing across the heavens. In one of his verses Gottfried Keller calls these latter the "friendly companions of the dwellers on earth." "As they wander on they attract and distract the burdened soul of him who observes them with wonder, and keep him amused all through the weary hours." Gurgling springs add to their upward gushing motion the soft underground murmur of their waters, while the beauty of circling motion is perhaps never more effectively shown than in the majestic floating of birds of prey. Darwin says in his Voyage of the Beagle round the World: "When the condors are wheeling in a flock round and round any spot their flight is beautiful. Except when rising from the ground, I do not recollect ever having seen one of these birds flap its wings. Near Lima I watched several for nearly half an hour, without once taking off my eyes. They moved in large curves, sweeping in circles, descending and ascending, without giving a single flap." Perhaps our pleasure is even greater in wave motions, as they roll over the ocean or are produced by the wind on a field of grain, or surge in the current of a rapid stream. These noble verses of Mörike's on the Rhine falls bear witness to the power of the æsthetic feeling so aroused:

"Halte dein Herz, o Wanderer, fest in gewaltigen Händen!
Mir entstürzte vor Lust zitternd das meinige fast.
Rastlos donnernde Massen auf donnernde Massen geworfen,
Ohr und Auge wohin retten sie sich im Tumult?...

"Rosse der Götter, im Schwung, eins über den Rücken des ander
Stürmen herunter und streu'n silberne Mähnen umher;
Herrliche Leiber, unzählbare, folgen sich, nimmer dieselben,
Ewig dieselbigen—wer wartet das Ende wohl aus?"[151]

Finally, we will notice dancing movements. It is not only among birds that the courted female gazes with interest at the dancing of the male; we see it in all public dancing. This is one of the instances where visual play is as important as the movement, for even among the participants pleasure is heightened by the exciting spectacle of the other dancers,[152] and it is true the world over that spectators of a dance always become as passionately aroused as do the performers themselves. The piercing trills with which the women of some negro tribes at intervals accompany the dance of the males are surely not merely invitations to the latter, but indications as well of their own excitement. For this reason many onlookers are impelled to keep time with the rhythmic dance by clicking the tongue or clapping the hands. "The feeling of pleasure which is kindled in the performer," says Grosse, "sheds its rays on the beholder as well.... In this way both become passionately excited, intoxicated by the sounds and movements; the transport constantly increasing, swells at last to veritable madness, which often results in violent outbreaks."[153] The solo dances of primitive peoples presuppose an onlooking public more than mass dances do. Among Bushmen and Eskimos the men dance alone, while, according to Eyre, Australian women do it sometimes alone and sometimes in companies to, arouse the men.[154] Among the civilized people of the Orient professional dancing girls perform in the presence of men, in which case the spectators alone can be said to play. And the same is true of our ballet, which, indeed, except for its direct sexual effect, possesses but little pleasurable quality.[155]

II. Playful Use of the Motor Apparatus

In this new section we by no means cut loose from what is sensory in a subjective sense, for of course we become conscious of our own movements only through the sensory paths of sight and what is collectively called touch, chiefly sensations of contact, and tendon and joint sensations. Yet from an objective standpoint we must enter upon the investigation of an entirely new province, where we shall be concerned not so much with the senses as with the

manifold co-ordinated muscular movements of which our bodies are capable, and which are necessary or at least useful for the accomplishment of the tasks of life.

Since these movements are progressively acquired, the child's first efforts can hardly be said to be voluntary. Many that are instinctive and automatic must be repeated over and over before voluntary ones come, for will implies an image which is a memory picture of the movement to be made. Preyer thinks that no intentional movements are made before the end of the first quarter.[156] Vierordt, indeed, says that their development is gradually progressive. "All indications point to the arm as first becoming obedient to volition, and the sucking movements, too, seem early to lose their reflex character. Then follow intentional movements of the head and neck and some groups of face muscles, and finally those of the lower limbs, which as late as the sixth month still move in the most haphazard manner."[157] Playful experiment then promotes this acquisition of control over the bodily movements by the will, and strengthens and renders it permanent after it has been acquired.

Playful movements naturally fall into two great subdivisions, namely, those belonging to the organs as such and those directed toward other objects in connection with such organs—a distinction already familiar to us in our study of the production of noises and tones. We will now consider the first of these divisions, the most important phenomenon of which is locomotion.

A. PLAYFUL MOVEMENT OF THE BODILY ORGANS

In other connections we have touched upon many movement plays, such as voice practice and the production of sounds by means of various bodily organs, experimentation with tactile stimuli, and watching moving objects. This sort of exercise often combines motor with sensor play, as has been frequently pointed out. Therefore, to avoid repetition, I will in this section, after a few preliminary remarks suggested by such bearings of the subject as I conceive to be essential, proceed at once to consider the most important and obvious of all movement-plays—namely, those connected with change of place.

In voice practice experiments with the larynx, tongue, lips, and breathing muscles are involved. When children whisper, for example, their enjoyment must be due as much to the lip movements as to the slight sounds produced. The fact that the blind deaf-mute Laura Bridgman[158] playfully indulged in the production of various sounds seems to confirm this, and the principle is applicable too to other noises. The child who claps his hands, splashes in the

water, bangs on the table with his fist, or puffs out his cheeks to blow a horn; the grown man who shuffles his feet, drums on the table or window pane, the noisy dancer, and even the piano or violin player who indulges in movements now loud, now soft, now slow, now quick—all derive a considerable part of their pleasure in the sport from the motor discharge which is involved.

No exhaustive demonstration is needed to prove that the same conditions prevail in experimentation with touch stimuli and the observation of motion, which is so often connected with it. “In the first year,” says Preyer, in speaking of the manifold and apparently aimless movements of the infant, “exercise of the muscles is the *raison d’être* of all this activity which appears to be aimless. An adult lying on his back could not repeat the commonest movements of a seven to twelve months child without extreme fatigue.”[159] In arm movements the development of right-handedness is of especial interest. Formerly it was attributed to the mother’s or nurse’s method of carrying the child, to the greater weight of one side of the body, and similar pretexts; but Baldwin’s investigations show that such extraneous influences have little to do with it, for he found on excluding such agencies a marked preference for the right hand in the seventh and eighth months, displayed first in strenuous grasping movements.[160] An entirely satisfactory explanation has not yet been offered, though Sticker’s theory, is perhaps most probable—namely, that the left brain hemisphere has a better blood supply than the right.[161] When there is some difficulty to overcome, some opportunity to display dexterity, there are heightened stimulus and greater directness in the movements of arms and hands. Older children delight to set themselves such tasks as, for instance, clasping the hands behind the back, so that one arm crosses the shoulder, or placing the open hand on a table and raising the ring finger without any of the others, or laying the fingers over one another, etc. When such efforts are overlooked and directed by parents and teachers, we have the beginning of gymnastics, which remains a play so long as the subject enjoys it. Free-hand movements, exercises with dumb-bells and weights and the like, so far as the interest is not centred in the foreign body, all belong here. The intense desire for movement in many forms of mental disease should also be noted in this connection, since they have an indirect playful character, and by their very exaggeration are calculated to throw some light on the conduct of normal humanity. No psychic derangement shows this more clearly than does mania. The voice of such patients, says Kraepelin, “is usually high-pitched.... They are contented, feel inclined to all sorts of fun, and teasing, singing, and joking,” yet all this is invariably followed by a sudden plunge into the contrary mood. “That grave symptom of derangement, strong propensity to movement

seems to stand in the closest connection with liveliness of spirits. The patient fairly revels in emotion; he is uneasy, can not long lie or sit still, stirs about, skips, runs, dances. He gesticulates wildly, claps his hands, makes faces, scribbles and rubs on the ground, walls, and windows, beats and drums on the floor, strips off his clothes, tears them to ribbons, etc."[162] Since movement and its opposite are closely connected, the question arises whether the strange rigidity of body manifested in catalepsy is not referable to the same cause. There is certainly often a certain designedness about it. "When any attempt is made to change the position of the patient every muscle is found to be tense. If the head is forced aside by pressure, it flies back to its former position when released. To support the head hardly requires more than the weight of a finger. We are best acquainted with the psychic organ of this stubborn resistance in the common cases where the patient responds contrarily to speech suggestions. He can be made to go forward by being ordered back, and *vice versa*, will take a seat when told not to, stand still when commanded to go on, etc."[163]

Finally, before going on to our principal subject, we should glance at the instinctive chewing motions which were mentioned among tactile plays. When a full-grown man going for a walk sticks a twig in his mouth and gnaws it the movements of his own jaw are of more interest to him than is the stick, except as it promotes sensations of contact. We take genuine pleasure in crunching toast and gnawing on a bone, and the unfortunate habit of biting the finger nails is one form of such play. Many smokers soon chew up the mouth pieces of their pipes and cigar holders, and others constantly bite pencil or penholder, and are unhappy when such indulgence is denied them. Betel-chewing, which, it is true, has the attraction of a narcotic, is indulged in, according to Von Bibra, by one hundred million human beings.[164] New Zealanders use *kauri*, the resin of a certain tree. "In the northern part of Sweden resin obtained from the trunk of a pine tree is very generally chewed."[165] Americans who twenty-five years ago chewed prepared resin have adopted the chewing-gum habit. Material for it is brought chiefly from Mexico; in 1895 four million pounds of *chicle* gum was imported for this purpose. Jules Legras says of Russia: "Gnawing sunflower seeds is the favourite amusement of children and of the poorer classes. The streets are full of shops where the beloved grain is sold, and the common people stuff their pockets with it. They skilfully split open the husk with the front teeth, discard it, and mechanically chew the kernel. It is a national habit, inexplicable to an outsider, for the seeds are tasteless; but the jaws are kept busy, and their motion forms an accompaniment to the vague dreaming of the poor people."[166]

Turning now to our subject proper—namely, playful locomotion or change of place—we find the biological significance of play, the elaboration of certain imperfect instincts, brought out with marked distinctness. The child's first practice in the direction of future walking is found in the alternative kicking, which is so essential to muscular development.[167] Further progress is marked by raising the body and learning to sit, efforts marking the beginning of the struggle with weights which Souriau regards as the leading stimulus to movement-play. So long as this struggle to retain his equilibrium lasts, the child's behaviour betrays the direct intention of the play. Preyer says: "In his fourteenth week my sturdy boy easily made his first attempt to sit, having his back well propped. In his twenty-second week the child could raise himself in the effort to reach my face, but not till the thirty-ninth week could he sit alone, and still preferred a back. In his carriage it was necessary for him to hold on even in the fortieth and forty-first weeks. But when for a supreme moment he did manage to sit up unassisted he was evidently delighted, and made the greatest efforts to preserve his equilibrium."[168]

Creeping is an imperfect though genuine sort of locomotion preparatory to walking. "It is a treat," says Sigismund, "to watch a creeping child. The tiny creature, seated on the floor, longs for something beyond his reach; straining to get it, he loses his balance and falls over. In that position he still stretches his hand out, and notices that he is nearer the object of his desire, and that a few more such forward motions would attain it. Soon he becomes more active, sure, and courageous, and learns to maintain his centre of gravity on three supports while he lifts the fourth member for his next step forward, for at first the child raises but one limb at a time, though he soon learns to use the right hand and left foot together. I have never seen one so use the hand and foot on the same side. Sometimes the child crawls backward like a crab, even when there is nothing before him which he wishes to shun."[169] Fouquières gives two beautiful ancient representations of creeping children, the first going toward some fruit which lies on a footstool, and the other gazing at a vase on the ground.[170]

Children who have a lively desire to roam before they are able to walk invent many expedients which afford them great satisfaction; for example, a little boy, Werner H——, has acquired remarkable skill in getting about by stiffening his arms as he stretches them down at his sides and swinging himself forward as if on crutches, as we sometimes see the unfortunates do who have had both legs amputated.

Learning to stand is an essential step preliminary to talking, and causes a child

the liveliest satisfaction, giving him further control over his own body, and responding as it does to an inborn impulse. Sigismund places the first efforts in this direction in the eighteenth or twentieth week. “If the nurse holds up a child of this age on her lap, supporting it under the arms, it will dance, hop, and spring perpetually like a hooked fish, bound like a grasshopper, draw up his legs like a closed pocket knife, and twist his head and neck—in short, he will exhibit the same mercurial exuberance of motion which pleases us in young goats, lambs, and kittens. The child’s movements, however, are naturally in the direction of the normal human attitude, and he will make desperate attempts to pull himself up by his nurse’s dress or the edge of a chair or his bath tub, and when by the exertion of this utmost strength he succeeds he commonly breaks out into loud cries of joy.”[171] The playful quality so clearly recognised here appears also in Preyer’s remark that his boy in the fortieth week preferred to be exercised in standing rather than in sitting, although the former was more difficult.[172] This fact no doubt enhanced the pleasure. At the end of the first year or beginning of the second the child is usually far enough on to stand entirely alone. “He is amazed at his own daring, standing anxiously with feet wide apart, and at last letting himself down rather abruptly.”[173]

Coming now to actual walking, it is uncertain whether the alternating kicks of the infant point to special instinctive impulses, but we may be sure that when a child pushes forward on being held with the feet touching the floor he feels the stirrings of instinct. “Champney’s child,” says Preyer, “was held upright for the first time at the end of the nineteenth week, so that his feet rested on the floor, and he was moved forward; his legs worked with regularity, and each step was taken accurately and without hesitation or wavering even when the feet were lifted too high. Only in this case was the alternation interrupted, and he made another effort to take the step with his feet in the air. Resting the body sideways on one foot seemed to transfer the stimulus to the other. These observations ground my belief that walking is an instinctive act.”[174] This happens somewhat later if the child is not moved forward on being held up; thus Baldwin, whose experiment included no such motion, found that the “native walking reflex” suddenly appeared in the ninth month, while previous to that only a single alternation appeared, which might well be ascribed to chance.[175] Independent experimentation begins when, having drawn himself up by a chair, the child walks around it with the help of his hands, all the time resting on the seat, in which progress the achievement of a corner is as critical a movement as the rounding of a jutting crag in the path of a mountain climber. Soon after this arrives the crucial test—the terrible risk of the first step alone, which, when

successfully accomplished, throws both parent and child into a transport of joy. The appreciative Sigismund gives a beautiful description of this too: “Forward steps having been practised while the hands cling to some fixed object, he is prepared to venture alone. This first step alone of a little child makes one involuntarily hold his breath at the sight. The small face reveals a conflict between the bold resolve to venture all and the cautious counsels of conservatism. Suddenly one little foot is shoved forward rather than lifted, and one hand at last stretched out as a balance. Sometimes that one step is all, and the little Icarus sinks down again. But often the child to whom the effort is particularly difficult makes, like a boy learning to skate or a man walking a rope, several steps in one direction, especially when the haven of safety is near at hand. Many children make no further attempts for weeks after the first; others, again, follow it up at once. Very gradually walking loses its anxious, doubtful character, and becomes an easy habit not requiring attention.” Froebel has well described the pleasure in success which, together with the gratification of instinctive impulse, makes learning to walk such a satisfaction. “The fact is well established,” he says, “that walking, and especially the first steps, give the child pleasure merely as a demonstration of his strength, although this is soon followed by other elements of enjoyment, such as the realization that it is means of arriving and of obtaining.”[176] As it becomes mechanical, walking, of course, loses its playful character. Pleasure in simple locomotion is experienced by adults, as a rule, only when the discharge of their motor impulses has been hindered by a sedentary life, and even then motion is not the chief source of satisfaction. The regular rhythm of walking acts like a narcotic on an excited mind, which reacts to it unconsciously. I remember that Ibsen’s John Gabriel Borkmann paced up and down like a sick wolf before the door of the wife from whom he was separated; and we find a fearful reminder of the restless walking back and forth of caged animals in the deep-worn footprints of the prisoner of Chillon. We find, though, for all ages games whose object is the conquest of some difficulty, great or small. We frequently see small dogs keep one leg up in the air without any apparent reason and, run along on three, and in the same way children try all sorts of experiments in walking. Now one of them is lame in one foot, now one small leg is stiff, now he drags his feet, now walks with a jerk or on tiptoe. Many of these movements are turned to account in elementary gymnastics, and those pathological subjects whose mania takes a playful turn show quite similar peculiarities in walking.[177] Almost as soon as the child has learned to preserve his equilibrium in ordinary walking he proceeds to complicate the problem by trying to walk on curbstones, in a rut, on a beam, on a

balustrade or narrow wall. Unusual facility in these leads on to rope walking, and afterward turns out to be of great service to the mountain climber on narrow ridges and snow-covered ledges. A famous architect was so foolhardy as to walk round the narrow leads of the Königstuhl tower in Heidelberg, and it is recorded of the ancient Norse king Olav Tryggvason that he possessed the accomplishment, among others, of being able to run across the oars of a boat while the men were rowing. Another form of self-imposed difficulty and consequent conversion of locomotion into play is the attempt to step on all the cracks in the pavement or floor or on certain figures in a carpet. Something of this kind must have led to the game of Paradieshüpfen in Germany, hop-scotch in England, la Marelle in France, in which certain spaces are marked out in the sand or on a floor, on whose outlines the foot must not be set.

Running games will form our next subject, and we find that the child's earliest efforts for locomotion are as much like running as walking. His first steps alone are, it is true most hesitatingly made, but the nearer the goal, especially if it happens to be his mother kneeling with outstretched arms, the more rapid are his movements. Gradually the distinction between running and walking becomes more marked. For an example of genuine practice for a quick run Preyer's observations may again be cited. He says that on the four hundred and fifty-ninth day the boy stopped short several times in his rapid course and stamped. In his seventy-seventh week this child ran nineteen times without stopping around a large table, calling out "mama," and "bwa, bwa, bwa,"[178] the while. This simple running soon loses its charm, and is not much used later in play until it is transformed into a contest and acquires a new and higher meaning, of which we shall speak presently. Yet there are many running games whose attraction consists in the difficulties to be overcome, and very rapid running is a delight in itself, throwing us into a sort of transport and exciting in us "je ne sais quelle idée d'infini, de désir sans mesure, de vie surabondante et folle, je ne sais quel dedain de l'individualité quel besoin de se sentir aller sans se retenir, de se perdre dans le tout."[179]

Running down a smooth slope is a diversion which easily tempts even grown people, and boys at least find something like it in their game of snapping the whip, in which game a chain is made with the strongest boy in front. He has the task of moving the whole line in curves, so that the end ones are obliged to run in dizzy haste. In both cases natural forces, coming to the aid of the individual's own efforts, add to the enjoyment. Overcoming difficulties is prominent in the Hellenic πιτυλίζειν, which it seems consisted in running on the tips of the toes, as well as in the equally ancient ἐκπλεθρίζειν, which was a peculiar varied

running, without curves, in a straight line back and forth, the line growing shorter and shorter till a central point was reached, where, as only one step remained, the runner came to a standstill.[180]

Hopping and skipping are also to be classed with running plays; the body is suspended in the air for an instant in all these movements, though in hopping and skipping the motion is more vertical. They belong in the same category with the vagaries of locomotion which I have pointed out, and any lively child finds it hard to dispense with them when out for a walk, just as lambs and kids do. In the ordinary skip one foot at a time comes with a slight shoving motion on the ground and gives us the beginning of a galop and the principle of the waltz, while hopping forms the foundation for the polka. This hop on one foot is utilized in many plays, such as the hopscotch already mentioned, and in chasing and fighting games, like "Cock Fight" (German Hahnenkampf), "Fox in his Hole," etc. In Greece the ἀσκωλιάζειν was a popular game, and Grasberger says that their hopping was the same as ours, and in some games he who accomplished the task with the fewest hops won the prize. In a catching game the contestants hopped on a circular line and attempted to touch one another with the free foot. Finally, the drollest and most popular form of the game, which never failed to excite laughter in all beholders, was the genuine Askoliasmos. A skin well oiled on the outside and filled with air was stepped on by the player, who attempted to stand on it while he went through various dancing and hopping motions. The favourite circus trick of running on a rolling cannon ball is a modern form of this.

Children begin to jump by leaping downward. Before the little experimentor has halfway learned to go down steps he likes to reach the ground by a jump from the last one, at first a difficult enough exploit. But soon this palls, and something harder is at once undertaken, just as the habitual drunkard attains to stronger and stronger potations. The three-year-old can take two or three steps or boldly leap from a chair on which he has laboriously clambered with this intent. When some large stone pillars intended for a garden gate lay in the street before my house all the children in the neighbourhood collected to enjoy the pleasure of jumping off of them. Psychologically this pleasure is derived not merely from the agreeable flying motion, but from the stimulus of difficulty to be overcome and a feeling of pride in encountering risks. Chamberlain tells of two small Americans who had in their familiar speech a word for "the feeling you have just before you jump, don't you know, when you mean to jump and want to do it and are just a little bit afraid to do it," and another for "the way you feel when you have just jumped and are awfully proud of it."[181] Perhaps the liveliest feeling of pleasure is caused

by the leap into water, because the soft, yielding, and yet resisting element furnishes an unusually long trajectory. Many South Sea islanders have cultivated this art to an astonishing degree. The pleasure of snowshoeing, too, consists chiefly in the circumstance that the path ends suddenly in an abrupt slope, over which the skilful sportsman flies in a tremendous leap amid a whir of soft snow. “To see,” says Nansen in his book on Greenland, “how the practised runner makes his leap into the air is one of the finest spectacles in the world. To see him whizzing boldly down the mountain, collect himself in a few steps before the spring, pause and take position, and then like a sea gull glide through the air, striking the ground at a distance of twenty to twenty-five metres immersed in a cloud of flying snow—all this sends a thrill of sympathetic pleasure through one’s frame.” Later, children learn high and long-distance jumps, the doorstep, a tiny stream and narrow ditch affording opportunity for the first practice, and an older boy leaps gaily over a low hedge, a wide brook, or his comrade’s back in leap-frog. The element of danger exists here and some combativeness, as though it were a sort of conquest of the object; these features are especially prominent when the vault is made over a blazing fire, as in the custom with some mountaineers’ games. It is first heard of in the Palilia, a herdsman’s game of ancient Rome, commemorative of the founding of the city, and the people of the Nicobar Islands believe that leaping through fire is a sure cure for colds, fevers, etc.[182] The salto mortale marked the highest degree of difficulty and danger—a Greek vase shows it as a somersault in the midst of the high jump. Norwegian youths can spring up so high as to touch the ceiling with one foot and agilely regain their upright position. The Greeks used weights of stone or lead, which they swung violently to intensify the force of the leap, the springboard being apparently unknown to them. Grasberger regards the statement that Phayllos of Crete could cover from fifty to fifty-five feet[183] as well authenticated, but it was certainly a prodigious leap. Similar incredible feats are reported of the ancient Germans, one being that of the Viking Halfdan, who jumped over a gorge thirty yards wide.[184] From this is but a step to the world-famed contest between Brunhilde and Gunther, in which Brunhilde hurled a mighty stone and then leaped after it as far as or farther than the stone went, and Siegfried performed the same feat, carrying Gunther with him.

Climbing is probably the outcome of a special instinct. The striking fact that a newborn infant is at once able to cling with his hands certainly points to this. It has been shown by Robinson that infants may cling fast enough to a stick to be lifted from the ground and held suspended in midair.

The first attempts at actual climbing occur in the second year in conjunction with creeping, and are usually efforts to go upstairs. Young animals whose future life demands skill in climbing also manifest this upward tendency. Where Lenz says that the two-weeks-old kid enjoys neck-breaking adventures and makes remarkable leaps, that he always wants to go upon piles of wood or stone, on walls and rocks, and that climbing upstairs is his chief delight,[185] he gives at the same time a faithful picture of dawning human impulses. Little George K——, a year and a half old, made his way in an unguarded moment from the garden to the third story of his father's house. Numberless accidents have resulted from the climbing upon chairs and tables, which is so indefatigably persisted in, and there are few plays which afford so much pleasure to older children as climbing trees. It is probable that, in spite of the danger of the situation, there is an instinctive feeling of security and comfort when they are cosily settled among the branches. We naturally attribute this, to the habits of their progenitors, but a simpler explanation of their enjoyment of the situation may be that their elders can not get to them. That girls gladly participate in this supposedly masculine indulgence is noteworthy. Marlitt and Mrs. Hungerford give amusing instances of trying situations in which older girls have been placed through this propensity. The tall and glossy beech tree, with all sorts of beauties luring one to its topmost branches, presents special difficulties to adventurers. Climbing steep cliffs, too, is a favourite pastime; one of the pleasantest recollections of my own youth is of climbing a wooded slope in the neighbourhood of St. Blasien in the Black Forest, where I spent half a day with two other children building a moss hut on an almost inaccessible crag. The modern fad of making foolhardy excursions to the highest peaks is too familiar to need enlarging on. It clearly shows that the most difficult movement plays are combative. Th. Wundt, the famous climber, is quite right when he says in his book on the Jungfrau and the Bernese Oberland that the mountain climber "takes Nature by storm; he does not expect that she will present a smiling aspect; he measures strength with her; he seeks a contest which will try him to the uttermost, and the longing for adventure is much stronger than any mere passive enjoyment." We find traces of this same spirit in old German records, as witness thus: King Olaf Tryggvason, to prove his prowess, climbed the Smalsarhorn, hitherto regarded as unscalable, and fixed his shield to its summit.[186]

With only a passing mention of swimming movements, in which the South Sea Islanders excel, I turn at once to the dance, or what may be called the artistic form of locomotion, confining myself, however, strictly to those forms of it which have to do with pure movement-play. We must, I think, assume that

elementary ideas of dancing are present in childhood, but the developed art belongs to adults. Besides the walking, running, hopping, and skipping of which we have spoken, the child makes use of every imaginable turn and attitude of the head, trunk, and limbs, and a careful study of the various gymnastic motions of all times and peoples could hardly reveal greater variety than is found among these little ones. A certain rhythm, too, is noticeable in their ordinary hopping and skipping, but the essential feature of the dance, the regulation of bodily movement by measured music, must be acquired. Preyer's statement that his child in its twenty-fourth month danced in time with music,[187] it seems to me, is an exception to the rule, for among the large number of small children whom I have seen dancing to music I can not recall a single one who kept time regularly and with assurance without some teaching and example. I myself learned the polka step, moving forward in a straight line, when I was a ten-year-old boy, and I can remember feeling that it was something new and peculiar, and that many of my comrades had great difficulty in achieving it. I am told by a woman teacher that she attempted to teach some little girls between five and eight years old to walk in time to a march played on the piano, and that not a single one of them could do it successfully on the first trial. Yet, on the other hand, it is certain that children learn dancing very quickly through imitation, especially among savages. It is amazing to see with what assurance these little ones can participate in the complicated dances of their elders. I shall return to this in speaking of imitative plays. The ring dances of European children, which we shall shortly refer to under social plays, are derived from mediæval and ancient dances of adults.

To find the sources of pleasure in dancing we must go back to the common ground of satisfaction in obeying the impulse for motion, yet it is not easy to assign a general explanation for the peculiar charm of rhythmical movement. Spencer holds that passionate excitement naturally manifests itself in rhythmic repetition; while Minor, on the contrary, sees in it the expression of a prudential instinct to restrain the fury of passionate feeling.[188] As Schiller, too, says:

"Es ist des Wohllauts mächtige Gottheit,
Die zum geselligen Tanz ordnet den tobenden Sprung,
Die der Nemesis Gleich, an des Rhythmus goldenem Zügel
Lenkt die brausende Lust und die verwilderte zähmt."[189]

This view is quite plausible when applied to the social effect of dancing, as Grosse has pointed out. Rhythm does subdue and order "riotous lust," and afford a harmless outlet to the general need for some expression of it. Yet it would be a mistake to suppose that its effect is always subduing, since, as a matter of fact, it often leads to the wildest tumult. "Oh, thou bold gamester," an old song runs, "Make for us a long row, Hip, hip, hurrah! how he can go! Heart, lungs, and liver he will overthrow."[190]

Spencer's remark makes it clear, from the other point of view, that rhythm is a most suitable instrument for the expression of passionate emotion, be it sad or joyful, but fails to explain why it is in itself intensely exciting and pleasurably so. Grosse justly says of Spencer's view: "According to this theory the rhythm of dancing movements seems to be only a sharply and strongly intensified form of locomotion. It does not at all explain the pleasurable quality of rhythm, and if we are unwilling to accept description in lieu of explanation we can only regard this statement of fact as introductory to further investigation."

Since Darwin's theory, mentioned above, has as yet found little substantial proof, the intoxicating effects of rhythmic motion must find some other explanation here. Such movements are employed among most peoples as a means of producing ecstatic conditions. Selenkas gives a simple instance from Borneo: "The candidate [for the office of doctor] was led before the Manangs as they squatted on the ground. The Dekan, or spokesman, addressed him, and, rising, anointed his forehead with oil and ordered him to go around the ring bearing a lance to which was hung a medicine bag. The Dekan followed him at a trot, and their speed was constantly increased as the accompanying song of the others grew louder, until at last the novitiate, gasping and stumbling as if hypnotized, broke down."[191]

Here we have in elementary form the kind of intoxication which is so fruitful in the production of religious ecstasy as it is indulged in by many Christian sects, notably the American Puritans in their rolling exercise. Numerous descriptions, however, show that some dance movements may produce the same effect; indeed, some investigators have been led to the belief that all dancing was originally religious, but this view is as one-sided as is the attempt to refer dancing exclusively to courtship. It is safer to regard it rather as an exciting

movement-play which possesses, in common with other narcotics, the magic power of abstracting us from commonplace existence and transporting us to a self-created world of dreams. When accompanied by special influences, which relate to fighting or love, the agitation produced is sufficient to stir the soul to its depths; but even without these associations the intoxicating power of movement is apparent, its simplest effects being a kind of anæsthesia, relaxation of all tension, unconsciousness of fatigue, and the illusion of being free from bodily weight, like a spirit floating about in space. As Schiller says, “Befreit von der Schwere des Leibes.” This illusion, in itself productive of great enjoyment, explains our pleasure in such dances as we are considering. Much has been said in criticism of the modern round dance. Apart from sexual considerations, to which, after all, I do not attach much weight, present-day dancing, is said to lack the social effect of mass plays and the stimulus of mimic dances. But if we look upon it as a simple movement-play, and consider it more from the standpoint of the dancer than of the spectator, that criticism loses its force. The slower time of old-fashioned waltzing was certainly more effective, and made a much more dignified spectacle, but from the dancer’s point of view it was a distinct advance when the tempo was quickened, for the present method plunges the dancing pair more surely and quickly into the delicious tumult and madness of motion.[192]

Since it would take too long even to glance at all the gymnastic dances of times gone by, it will serve our purpose to point out those which were controlled by rhythm. The wild leaping of mediæval ring dancing, where it is said that even the ladies jumped a distance of six feet, and flew through the air like birds; the Spartan βίβασις, kept up until exhaustion ensued; the forward, sideward, and backward springing, and the measured tramping of the Australian corroborris; the squatting and kneeling of the Nicobar Islanders; bowing the body, swinging the arms, and nodding the head in the Dajak war dance; the clapping and “Haxenschlagen” of Europeans—all these are typical phenomena. Sometimes, in the midst of the general agitation of the body, one part will remain rigid, as in this instance, described by Man: “The dancer bent his back and threw his whole weight on one leg, whose knee was crooked; the hands were stretched out before his breast, one thumb held between the other thumb and forefinger while the other fingers were strained forward. In this position the dancer turned round, hopping forward on the supporting leg, and with every hop stamping on the floor with the free foot.[193] Similar spreading out of the fingers is mentioned in Selenkas’s picture of a Malay woman’s dancing in Sumatra,[194] and I saw a comic European dancer hold his arm out horizontally, but turned up from the elbow in a stiff manner, which made the immobility of the upper part of his body

appear in ridiculous contrast to the lively motion of his legs. It would seem that the inhibition of all involuntary muscular innervation produces more absolute surrender to the prescribed movements of the dance....”

Before entering on the second half of this section we must devote a few words to artificial methods of moving the body, which are divided into two classes, those which are passive and those employed in active locomotion. Naturally the first implement of this kind to be mentioned is the cradle, of whose use among the Greeks we find no evidence, but the Romans had them since the time of Plautus. The oldest German record of them is in the Saxon manuscript at Heidelberg.[195] Of course, the cradle’s rocking motion and its soothing effect should be included in our enumeration of agreeable movements. The same may be said of swinging, which we find practised by many birds and by the ape; indeed, one case is recorded where a monkey himself attached a rope to the projection of a roof and swung himself on it. The human race, too, probably without exception, enjoy the sport. The hammock is in some cases the prototype of the swing. Von den Steinen relates of the Brazilian Bakairi that the men when at home spend most of their time swinging in hammocks.[196] Parkinson describes a still more primitive sort of swing. It seems that the Gilbert Islanders select a stout, well-grown cocoanut tree and attach a cord to it, on the other end of which is a club. A young woman climbs on the trunk, and taking her seat there is swung by a youth, who, watching his chance when the motion is well under way, catches hold with his hands and swings with her.[197] The Greeks had several forms of the swing, among them the joggling board, consisting of a flexible plank supported at its ends on fixed beams, and the rope swing which with its comfortable seat supported by four cords was used by adults. The Berlin Museum possesses a bowl ornamented with the figure of a fawn running under a young girl in such a swing and sending her high in the air. Athens celebrated a special holiday called after the swing, αἰῶραι.[198]

Pleasure in riding and driving being partly due to the control we have over the horses, such enjoyment is a combination of active and passive. Even when we are only steering a boat the illusion is easily supported that we are to some extent responsible for its progress. Riding has other elements of attraction: besides the forward motion and lofty seat there is some peculiar enjoyment of each particular gait, the sensuously agreeable canter and the hard shake of the trot, which, so far as it can be pleasurable, furnishes an instance of more vehement enjoyment. Among artificial means of locomotion, those are most agreeable which afford a swift and yet smooth gliding or rocking motion. Souriau says in

his Esthétique du Mouvement that the chief attraction of movement-plays lies in the overcoming of gravitation. But in that case, as I pointed out in my earlier work, downward movement would have no charm, since gravitation is there triumphant. The child's first jump is, as we have seen, downward, and the downward rush of a sled fills us with exquisite delight. Souriau's other supposition, that perhaps it is the exemption from friction, from the slight hindrances and detentions which commonly attend our movements, which accounts for our pleasure,[199] seems more probable. It is to be hoped that among the sports of the future, flying either in balloons or with flying machines will be included. Lilienthal, in recounting his experiences in these arts, assures us that gliding through the air in a slanting direction affords a new and delightful sensation.

A long list of inventions, for the most part recreative, meet the demand for aids to active locomotion, notably appliances for rowing and the bicycle. Among ancient implements of this character I mention but two: stilts and snowshoes. Running on stilts is a favourite sport of children, both on account of the difficulties it presents and because of the elevation it affords. It was practised by both Greeks and Romans, and Pollux mentions a Spartan dance which was performed on stilts, probably the kind which is bound to the foot.[200] In speaking of the ethnological distribution of this custom Andree says that stilts are found all over the world. "In China they are very skilfully used, and are not unknown to Africa among many African tribes. The negro boys left of the Congo bind stilts to their ankles to appear taller. They are well known to the Malays and the inhabitants of the South Sea Islands. In Tahiti a limb of a tree is used, having a smaller branch projecting at about a metre from the ground, and in this fork the foot is placed. The beautifully carved stilts of the Marquise Islanders have attained a certain celebrity."[201] The snowshoe, which has recently become popular once more, seems to be as ancient as the skate.[202]

"In skating," says Weinhold, "the men and boys emulated the example of Ullr and Skadi, who must have been very gods of snow and ice. But they did not use steel skates like ours, but stood on long boards and held a staff to steady them. Many Norsemen became famous for this kind of running; such sagas of their skill have come down to us.... The Finns were teachers of this art, which was carried to great perfection among them. In their peace treaties any violator of them was menaced with being called a traitor as far as ships sailed or shields glittered, as the sun shone or snow fell, or the Finn could skate."[203]

B. PLAYFUL MOVING OF FOREIGN BODIES

The primitive impulse to extend the sphere of their power as far as possible leads men to the conquest and control of objects lying around them. We can distinguish six different groups of movement-plays resulting from this impulse: 1, Mere "hustling" things about; 2, destructive or analytic play; 3, constructive or synthetic play; 4, plays of endurance; 5, throwing plays; 6, catching plays.

1. *Hustling Things about*

By this rather inelegant but expressive term we designate a kind of play which belongs to early childhood. From the grasping impulse the tendency is developed in the second quarter to push and pull things about in all directions, to shake and test them with hands and lips, to seize and to push away. External objects are all playthings to the child, says Perez, all objects of his investigating tendencies. "Il les manie, les tourne, les abat, les redresse, les jette, les reprend, les poursuit à quatre pattes, quand il ne peut les atteindre, les attire à lui, les frappe, les uns contre, les autres, fouille dans leurs profondeurs, les entasse et les sépare, enfin joue ou s'instruit par eux de mille manières."[204] Tearing paper gives particular pleasure. The child "seizes it with avidity, crumples it up in his hand as if pleased to find that there is power enough in the tiny fist to change the form of anything, or he polishes the tables with it as zealously as a Dutch woman."[205]

"A child delights to play with things that can be put in motion, takes pleasure in shaking a well-filled purse, turning the handle of a coffee mill, pulling out drawers, dabbling in water, and for the same reason older children are fond of handling smooth sand and clay."[206] Autenrieth gives a good instance of what we call joy in being a cause, which is conspicuous in all play of this class. "All small boys regard it as a treat to be allowed to paddle in street puddles, where they can produce a great effect with little effort."[207]

Much that might suitably be classed here has already been mentioned in connection with seeing, hearing, and tactile plays, since the impulse to set surrounding objects in motion is very closely connected with the desire for sensuous excitement. To avoid repetition I will simply refer to what has been said, and content myself here with adding one more play to the list, as it has special claim to be classed with them—namely, flying kites and similar play with captive insects. Although a little child can have but a very imperfect conception of the difference between animate and inanimate objects, yet living creatures certainly have a paramount interest for him. Everything which flies or crawls is watched and questioned with an almost passionate interest, and the desire to

follow a flying insect and to possess it leads the child to tie a string to some part of its body. K. von den Steinen saw two Bororó boys in Brazil, one of whom had a bee and the other a butterfly fluttering on a cord.[208] In Greece such sport was called μηλολόνδη or μηλολάνδη. Gold beetles were attached to cords three yards long, with pieces of wood on the end, and unmercifully pulled about in the air—veritable "hustling" indeed.[209] Children sometimes treat little birds in the same way. "When a boy catches a sparrow," says Geiler von Kaisersberg, "he ties a thread one or two ells long to it, letting the bird fly while he holds the cord in his hand. If it darts off and tries to get away the boy jerks the string, and the poor little creature falls down again."[210]

Paper kites in the form of birds and animals afford similar entertainment, and have a remarkably lifelike appearance as they sail aloft. They impart to their owners a pleasant sense of a widely extended sphere of control. This fine sport originated in China, where it is the national game. Bastion saw Siamese children[211] playing with kites, and the Berlin Museum has paper ones from the Soudan. They are in use also in the South Sea Islands as far down as New Zealand.

In concluding, I remark it was this faculty of busying one's self with all sorts of objects in this kind of play which first suggested to me the term experimentation which I have found useful in a much wider sense.

2. *Destructive (Analytic) Movement-Play*

The simplest and earliest handling of external objects exhibits the fundamental principle which differentiates the forms of our conscious activity, showing them to be such as make for division or for concentration. Play which separates or analyzes easily acquires a special character which allies it with the fighting instincts and concerts it into wild destructiveness. The veriest infant shows its beginnings in his desire to tear paper, pull the heads off of flowers, rummage in boxes, and the like; and as the child grows older he displays more clearly this analytic impulse—boys as a rule more than girls, be it noted. They are constantly taking their toys to pieces, dissecting tools, weapons, clocks, toys, etc.; and since the child, like the savage, has not our clear perception of the difference between what is living and the lifeless, he will pull to pieces a beetle, a fly, or a bird with the same serenity which accompanies his demolition of a flower. Perez tells this of a child hardly ten months old. "His nurse put him on the grass and gave him a turtle to play with, and as he seemed to be absorbed in watching it, left him for a moment. When she came back one of the creature's legs was torn half off, and

the zealous investigator was applying his powers to another."[212] As far back as Fischart's time this was known to be different from actual cruelty, and Keller in his Romeo und Julia auf dem Dorfe gives us a classic instance. The boy and girl were playing together with a doll which he suddenly jerked away from the little girl and mischievously tossed up in the air. The doll came to grief in his hands, for a little hole appeared in one of her knees and some bran was escaping. The little girl did not seem to notice the hole, so the boy kept quite still busily making it larger with his finger and increasing the flow of bran. His silence at last aroused her suspicion, and she came closer and beheld his wickedness with horror. "Just look at that!" he cried, holding the leg so that some bran fell in her face; and when she tried to reach the doll, he leaped away, and would not stop until the whole leg hung limp and empty as a husk. Then follows a description of how the offended child was finally won over to join the boy in the work of destruction, helping to bore hole after hole in the body of the martyr. Other examples of the workings of the destructive impulse will be adduced under fighting plays.

3. *Constructive (Synthetic) Movement-Play*

Constructive play bears about the same relation to imitation that analytic play bears to the fighting instinct. Circumstances under which this relation can not be traced are comparatively rare and very primitive. However, it is important to bear in mind that back of the μίμησις, in which Aristotle finds the essence of artistic effort, and back of the overflow of dammed-up energies which the new psychology emphasizes, there is still something primeval. Ribot calls it "Le besoin de créer," or a demand for some external result of our instinctive movements, which is, after all, but a specialized form of joy in being a cause.[213] Pleasure in the work of our own hands, which takes a negative form in destructive sport, here becomes positive creation, the instinct for building, for uniting scattered elements into a new whole. Its simplest form is found in the child's moulding new forms from some suitable material, their chief charm being their newness. Moist sand is heaped up or dug away, snow tunnelled through or rolled into a great ball, sticks of wood piled, water collected in a pond, etc. Such things are always going on where there are children. "I have a boy in mind," says Michelet, "hardly eighteen months old, who claps his hands joyously when he succeeds in laying one little stick upon another. He admires his work, and, like a small creator, seems to say: 'See that? It is very good.'"[214] Marie G—— affords the following pretty instance: One day, when she was about three, she sat on the floor in great distress, with tears pouring down her cheeks. Soon she

noticed that the drops rolled down like silver balls on her woollen dress, and at once began to collect the transparent pearls in a fold, and so accumulated as she sobbed a little “heap of woe” in her lap.

We readily see how imitation brings about great variety in the manifestations of the constructive tendency. The fun is not at its height until the sand is converted into mountains, tunnels, moats, and walls, the snow into the figure of a man, the mud to a similitude of dolls, the woodpile to buildings, water to lakes, streams to waterfalls, etc. Arranging the same or similar objects in rows is a more advanced and yet primitive kind of constructiveness. Preyer reports such arrangement of shells, pebbles, and buttons in the twenty-first month.[215] Where this is not imitation of elders it may be regarded as the forerunner of that preference for regular succession which is so prominent in decoration.

Closely connected with all this is the disposition to make collections. The disposition to appropriate and cling to whatever attracts the attention (James[216] makes it a special instinct, which he calls appropriation or acquisitiveness) is a feature of constructive activity. Animals as well as children try to accumulate whatever pleases them. Viscachas, woodrats, various members of the crow family, and many other birds, have the habit of hoarding especially bright objects. The inclination first shows itself in children in their collecting in one place various things of only ordinary interest, as in the pockets of a small boy,[217] or a girl’s bureau drawers; and adults too often retain this habit. G. Keller, whose *metier* for the grotesque is well known,[218] gives exaggerated instances of the mania for collecting, as in the case of the lacquered cabinet belonging to Züs Bünzlin, one of his heroines. It contained a gilded and painted Easter egg, a half dozen silver teaspoons, the Lord’s Prayer printed in gold on a red transparent substance which she said was human skin, a cherry stone on which a crucifix was carved, a broken ivory box lined with red silk and containing a small mirror and a thimble, another cherry stone inside of which a miniature game of skittles was going on, a nut with a Madonna in it under glass and a silver heart inside, and so on. But the passion for collecting reaches its height only when some particular kind of thing forms its object. It is natural to us all to get together as many things as we can of a kind which especially attracts us. When the four-year-old girl who never tires of picking flowers ties those she had plucked into a bouquet to carry home, we have the beginning of discriminating collection; when she searches for and hoards shells or coloured pebbles of unusually perfect shape, she is really within the charmed circle. Munkacsy tells us of his childhood: “Strange as it may seem, my chief enjoyment was in gathering stones

on the street, and many a box on the ear has the habit earned for me. I stuffed my pockets so full that the integrity of my trousers was seriously threatened; and besides, my father had frequently forbidden it."[219] Boys will collect anything, says James, which they see other boys collect, "from pieces of chalk and peach pits up to books and photographs."[220] Of the hundred students whom he questioned, only four or five had never collected anything. The words "which they see other boys collect" intimate that imitation and rivalry have much to do with this impulse. Any boy is admired and envied who has very rare butterflies, beetles, eggs, stamps, etc., or a large number of them; as indeed is any man, for the same principle applies to adults. There are other manifestations, too, of the combative emulative spirit which is active in almost all play. The search for more specimens often leads to contests which place even those who are otherwise honourable in an attitude of open hostility, and admits the practice of deceit, treachery, and robbery. Kleptomania is frequently nothing else than an overwhelming and imperative impulse for collecting. Yet the fact that adults collect things which have no intrinsic value shows that imitation and the combative spirit are here only incidental, in spite of their seeming weight. In impulsive insanity the patient carefully saves the refuse from his own body, hair that has been cut off, finger nails, bits of skin, and even more unpleasant things. This must have its origin in a deep-rooted demand for synthetic activity.

4. *Playful Exercise of Endurance*

The play which we have been considering gains, as other kinds do, a further charm when difficulties are associated with it, and it becomes more like fighting play. When Strümpell's little daughter learned to grasp easily she was no longer satisfied with holding ordinary things, and took to picking up objects so small as to be difficult to get hold of.[221] When she was two and a half years old she enjoyed opening the door of a little clock, and never tired of fitting the small snap into its slot; she could also thread the finest needle. Animals, too, seem to enjoy overcoming difficulties. Parrots like to take out screws, and Miss Romanes says that her monkey tried with indefatigable perseverance to put back the handle on a hearth brush which he had taken apart, and turned away from it at once as soon as he succeeded.[222] There are all sorts of puzzles which indulge this fancy, such as untying apparently fast knots with a single jerk, disentangling intertwined rings, taking balls or rings off an endless cord, taking two corks, held between the thumb and forefinger of one hand, with the thumb and forefinger of the other without leaving the hands joined, and many such things. The Greek χαλκισμός is explained for the first time by Becker in the fifth scene of his

Charikles: “It was an attempt to bring a coin spinning on its edge to a standstill by touching it from above with the finger.” Rochholz thus describes the Swiss “Fadmen”: “A boy sitting in a basket which is swung to and fro in the air gets a prize if he succeeds in threading a needle during the process.... In Aargau the contestants sit on a stout bottle with their feet crossed.”[223] Strutt gives two English examples from the fourteenth century. A youth standing on a light flexible pole stretched over water, attempted to put out one candle with another.[224] The familiar Chinese game which we call jackstraws was mentioned by Amaranthus in 1715.[225] The Berlin Museum has many such puzzles from remote parts of the world. O. Finsch mentions two (probably imported) much used in India: the Chut-jueh-mudra, in which a cube is put together from tiny bits, and the “five-horse game,” where two wooden rings strung on a cord are to be removed without loosening the knot, and other such sports as are common among ourselves.[226] The difficult task of forming various figures with a string held stretched between the two hands (cat’s cradle) affords entertainment for hours at a time to the Eskimos in Baffin Land. They call the game *ajarorpoq*.[227] It is found also in Australia, Borneo, New Guinea, New Zealand, and Java, where, Schmetz says, the children play it too. Finally, I may add that von Hartmann classes much of the ladies’ fancy work with such play, inasmuch as it does not possess artistic value, and its intrinsic worth is out of all proportion to the effort expended.[228]

5. *Throwing Plays*

Whereas the forms of movement-play which we have been considering are more or less connected, throwing is regarded by many as a special instinct. Preyer says that it is “undoubtedly instinctive.” When monkeys get excited they throw anything they can get hold of; and a five-year-old idiot whose brain structure was much like that of a monkey did the same thing when he was teased.[229] In any case, throwing is certainly an interesting phenomenon, which, if monkeys did not indulge in it, we should claim as a prerogative of the human race. At first it was defensive, the missile serving at a distance as a substitute for one of the bodily members, and consequently first gave the idea of a machine, if we take the word μηχανή in its more general sense. The next step, and one which monkeys can not attain, is the fashioning of the projectile into a work of art.

Accidental dropping of objects seems to introduce the idea of throwing to the infant mind, and what we have called visual play furthers its development, since the child from watching the falling object comes to repeat the process

intentionally, and so learns to throw. The following report of Preyer's traces this progression: "Thirtieth week: Frequent dropping, but still not noticed. Thirty-fourth week: The child looks after the object dropped, but indifferently. Forty-seventh week: The child throws down anything that is given him after playing with it a little, and often looks after it. On one occasion he threw a book on the floor eight times in succession, and his pursed-up lips indicated serious determination."[230] Further developments were hampered by the interference of his parents. Sigismund, too, gives valuable notes, and adds some luminous remarks on the biological and psychological significance of such play. "All children like to throw," he says, "and are often blamed for it very unjustly. We should remember that although some window panes may be endangered by such play, it lays the foundation for man's supremacy over the other animals, and that by means of it muscles are gradually developed and strengthened. We should rejoice, then, with the children when a stone goes a long way or bounds into the water with a splash. When children get out of doors the desire to throw something takes possession of them; even the yearling picks up pebbles and delights to roll them. The older boys stand on the coping or carriage block, and are engrossed in testing the force and directness of their aim. They are trying the power of will over matter."[231] This is the correct designation of the peculiar satisfaction derived from throwing. It is that which comes from sending the object from us and, as it were, projecting our individuality into a wider sphere of action. Souriau says: "We take a special interest in the extension of motion originated by ourselves. It becomes a part of us. The force which we behold at work outside of us is our own."[232]

If we include rolling or sliding in our definition of throwing, we are confronted by a bewildering variety of games;[233] but since the ends of a general psychology of play would not be furthered by an enumeration of these, we will try to single out such as illustrate the varied forms of satisfaction which throwing in general affords. First of all let us keep in mind our principle, that inventive play presupposes a complication of instinctive tendencies through the satisfaction of which enjoyment is greatly enhanced. Usually it is impulses for fighting and imitation which ally themselves with that toward movement and render the play more varied and pleasurable. There are, indeed, very few throwing plays that have not culminated in contests of one kind or another, and many are at the same time imitative, though whether they were originated by children or adults it is difficult or even impossible to say. Our study of primitive acoustic instruments showed that the child is sometimes actively inventive. Trying, then, to keep clear as much as possible of fighting and imitative play, we distinguish several kinds

of throwing plays which we may briefly characterize as follows: (*a*) Simple throwing, upward, downward, or horizontally; (*b*) propulsion by means of a blow (*c*) rolling, spinning, shoving, and skipping; (*d*) throwing at a target.

(*a*) Simple Throwing

Downward throwing is, as already said, the easiest and most natural movement of the kind to a child, from the fact that he learns it by letting things fall. It appeals at the same time to his sight, and quite as much perhaps to his hearing. To send toys, spoons, trays, and books rattling, crashing, and slamming on the floor is a pastime which children will keep up as long as they dare, as the young Goethe tossed the dishes and pots out of the window into the street and enjoyed the clatter. A friend of mine was one day holding his two-year-old nephew in his arms near an open window, and gave the child a silver cigarette case to play with. He hurled it to the street below, to the alarm of passers-by, and called out a loving farewell after it. Older children enjoy throwing something down from a bridge or tower, and sometimes in default of other ammunition make use of Nature's supply of saliva, as many of us perhaps remember from having our ears boxed for such indulgence. The fascination of sending stones over a precipice appeals to adults as well. Throwing forward is learned almost as early as the other; as soon as he can toddle every child tries to throw pebbles across a brook or into a neighbour's yard, the larger the shot the greater his satisfaction. Most of the toys, borrowed from long-disused practices of adults, which cater to this impulse belong under another head—Throwing at a target.

Among the earliest of these were the catapult, the ancient discus, something like the English quoit, and the sling. We often find grown men testing their strength and skill in throwing. Once when I was on the banks of the Lünersee a young traveller used to try to throw stones into the lake, which appeared to be but a few paces from the house but was in reality much farther. Following his example, other tourists would join in the game in spite of their fatigue, though generally with but little success. At Swiss festivals the herdsmen keep up an ancient Aelplerspiel, which consists in throwing heavy stones as far as possible.[234]

That wonderful passage in the Odyssey where the godlike sufferer threw the discus, the stone hummed loudly as the spectators bent to the earth under the force of the blow, is a classic example of instinctive æsthetic appreciation, and serves as a match for Gretchen's remark, "Then quivered at every throat the blade which I felt at mine." Upward throwing is acquired somewhat later, perhaps, because children easily lose sight of the missile which goes far above

them. Their first efforts are usually to toss a ball a very little way up, but boys soon acquire the uncomfortable but effective method of bending backward before making the throwing motion. Homer refers to this too: “Behold! He has hurled it [the ball] aloft to the shadowy clouds, bending backward.” As a little fellow I often tried to throw over tall trees, and my grandfather used to tell me how, when he was a young painter in Rome, he used to vie with the street urchins in throwing stones over the Arch of Titus. A favourite game of this kind is played by placing a ball or pebble in a sling which is whirled so rapidly that it hums. In Heidelberg, where many grounds are planted with plane trees, autumn invites the children to a game with the long fruits which hang by threads from their branches, a natural toy which the little ones are quick to take advantage of. Among toys originating in imitation the bow is sometimes used for sending arrows aloft for the simple pleasure of watching their upward flight, though, of course, its chief use is for aiming at a target.

(*b*) Throwing with the Help of a Stroke or Blow

Here we must consider the transference of motion to the missile by means of a sudden blow, a method closely allied to simple throwing, though in some of its modifications, as, for instance, when the radius of the bodily movements is artificially lengthened and the communicated force correspondingly increased, introducing a large circle of new plays in most of which the arms are the only bodily organs employed. I notice first the various games of skill played with rubber balls, principally by girls. The descending ball is met and again impelled upward by the open palm, the closed fist, or even one stiffened outstretched finger. There are similar games requiring more powerful strokes and better suited to masculine taste. Thus the Romans had two kinds of balls, one very large, the follis, and the other smaller, the folliculus, which were struck, the former with the forearm protected with bandages or a wooden ring, and the latter with the fist.[235] The first is still much liked in Italy under the name of giuoco del ballon grosso, the player sheathing his arm in a sort of muff; the other game is preserved in the English handball.[236] For an ethnological example we may turn to the Gilbert Islands; in their game for men, “Oreanne,” they use a cocoanut shell bound with cords, tossing it lightly into the air and propelling it by a blow from the hand.[237] And we may also cite the game carried to perfection in China, and called by the Greeks κωρυκοβολία, in which a huge suspended ball is kept in motion by blows from a number of players. A pretty contrast to this is found in the Samoan game, where an orange instead of a ball is hung in the middle of a room, about sixty centimetres from the floor. The players sit in a circle around it,

each being provided with a small pointed stick with which in his turn he gives the orange a blow as it circles past.[238]

The human leg, with its fine muscular development and its long radius, is a favourite and variously used propelling implement. Kicking is a primitive method of fight which children make early use of, and the famous incident in the French Council Chamber is sufficient to establish its adaptability to the requirements of the highest culture. The game of football proclaims its triumph as an instrument for play, where, too, the value of movement-play is obvious. This game, which Anglo-Saxons are wont to regard as their peculiar property, is claimed by Mosso to have originated in Italy in the time of the Renaissance, when physical exercise was a fad with high and low. It is true that such a game was described in great detail in 1555 by Scaino in his celebrated Trattato della Palla under the name of giuoco del calcio, and the writer insists that shoes with soles of buffalo hide are indispensable for the players. While our game of football is a hotly fought contest, Forbes describes a form of it popular in Sumatra which is nothing more than a skilful movement-play. During the dance festivals, which last for several days, "the young people amuse themselves on the village green with a ball game called Simpak, in which they vie with one another in the display of measured and elegant movements in the presence of the girls and the public generally. About twenty youths arrange themselves in a circle and keep a large hollow ball skilfully wrapped with ratan in the air by hitting it as it descends with the side of the foot; they are not allowed to touch it with anything else. In delivering the blow the leg is thrown almost perpendicularly into the air, while the body assumes a horizontal position, and the beauty of the movement consists in the fine swing which restores the body to an upright position without upsetting the player."[239]

An innumerable variety of games depend on the principle of increasing the arm radius, including many of the favourite amusements of young and old. Golf,[240] cricket, tennis, and croquet may be mentioned as types. Buildings[241] put up especially to play in, witness how much such exercise—which, by the way, develops the body much more systematically than any regular gymnastics can—was formerly valued in Germany. In these buildings games using rackets and bats were most common; one, which was hardly more than mere knocking the ball back and forth was very popular and was called "Pelotieren."[242]

The citation of primitive examples is more to our purpose, and I select first two games in which bits of wood are employed in lieu of balls. One in the Holstein Klink- or Klischspiel. A chip of a peculiar shape is balanced on the end of a

stake driven diagonally into the ground and then hit from below with a sort of club. The other is simpler still: it is called Porscheck in the game books.[243] A cigar-shaped bit of wood is so placed that one end is free, and a blow on this free end sends it whirling in the air. In Heidelberg, where this game is much cultivated, and is dignified by frequent contests, the man about to strike asks "Tenez?" whereupon his antagonist answers "Oui," neither party having the slightest suspicion that they are speaking French—a proof of the power of tradition.[244] Similar games are played by children, one being accompanied by singing as the piece of wood or arrow is shot into the air, and Rochholz suspects that this is a survival of a religious ceremony symbolic of the flight of winter before the fiery darts of spring. If so, it is one of many games which originated in this way. But how did the religious custom arise? Does not tracing its origin lead us in a circle back to playful experimentation, as we found to be in all probability the case with the discovery and application of some musical instruments? It is most likely.

(*c*) Rolling, Spinning, Shoving, and Skipping Foreign Bodies

In this division I group together such plays as lend a special character to the movement of the object, including them all, however, in the general class of throwing play, since it would unnecessarily complicate matters to make a separate class of them. In all plays with rolling balls, such as tenpins and billiards, pleasure in motion as such forms the undercurrent of the satisfaction afforded, even when they develop into important contests. The thundering roll and crash of the heavy wooden ball, and the noiseless, lightning-quick motion of the elastic ivory one, each has its charm. In a billiard room it is amusing to note how irresistible is the impulse to most players to take the balls from their pockets and roll them on the green surface after the game is over. Primitive forms of such games no doubt originated in experimentation with the round or disc-shaped stones found in every river or brook bed. Many fruits, too, are used in the same way—the horse chestnut, for example, being a favourite plaything wherever it grows. Yet the manufacture of artificial balls is no doubt very ancient, but inquiry into that must not detain us here. After the first years of life, when rolling in itself is an object, such balls are used in relation to some goal, perhaps partly because they are constantly getting lost when knocked aimlessly about, and the children do not wish to risk their precious possessions.

Other rolling toys, such as wheels and hoops, whose motion is kept up by means of continuous striking, offer a very different kind of amusement. The violent running, combining as it does something of the zest of the chase with the

pleasure of overcoming a difficulty, forms a delightful compound with the enjoyment of the rolling as such. The Greeks called the hoop τροχός or κρίκος. They were rather large, and made of metal studded with tinkling bells and propelled by a metal rod. Ganymede is often represented with such a hoop. The Romans had an extraordinary fondness for this sport, and Ovid, who refers to a teacher of the art of hoop rolling, says in one of his enumerations of the spring games:

"Usus equi nunc est, levibus nunc luditur armis,
Nunc pila, nunc celeri volvitur orbe trochus."

Fouquières cites a passage from Martial about youths rolling hoops on frozen streams. Another play with wheels consists of whirling a small one on a string passed through its axis, a practice both ancient and modern; and, too, there is the beautiful sport of rolling blazing wheels downhill at night, as is the custom with many mountaineers. Here, of course, the element of pursuit is wanting.

Single discs, such as coins, are used for the spinning of which we have already spoken. Sometimes it was spun horizontally on a peg fixed at its axis, forming the toy called by the Greeks στρόβιλος, and by the Romans turben. But much more important is the conical top, whose dance can be indefinitely prolonged by skilful whipping. There are few plays which foster the illusion of our having a living thing at our pleasure as effectually as this does. H. Wagner tells of a small boy who liked to keep several tops spinning together. "Each had its name, and he talked to them all. The one which spun longest was his favourite, and he tested them by setting them all in violent motion and leaving them while he ran down in the yard. When he came back he rejoiced over those that were still spinning."[245] This is a good deal like a little girl's behaviour to her dolls, though the boy's relation to his toys is rather that of a teacher than parent. This difference comes out strongly when the children play with a puppy: the girl wants to wash and pet it, while the boy will teach it tricks. The widespread popularity of the top is an indication of its importance, and its variety of names among the ancients witnesses to its high favour with them (βέμβηξ, βέβιξ, ῥόμβος, στρόμβος, etc.). It was found in the third city in the Trojan excavations. Boys threw their tops in the courts and streets by a leather string, and accompanied with a monotonous cry τὴν κατὰ σαυτὸν ἔλα, or στρέφου, μὴ ἵστασαι.[246] Tibullus likens his lovesick heart to a top "which a restless child spins on smooth ground with a jerk of the cord."[247] Its German names are even more numerous than are the antique (Ganzknopf, Topf, Topsch, Triesel, Drudelmadam, Habergais, Krüselding, Schnurrprusel, etc.). In early writings a top humming on ice was used as a figure of rapid motion, and such comparisons are quite frequent with old German poets. This one, which incidentally proves that top cords were used at the time, is particularly striking:

"Ez gewan ine topfe
Vor geiseln solhen umbeswanc,
Als sî mich âne minen danc
Mit slegen umb und umle treip."[248]

In the Indian archipelago many stone[249] as well as wooden tops are used. Ten Kate gives illustrations of massive yellow painted wooden ones from there. The conical shape is about the same as with our own tops, but it lacks the horizontal grooves.[250] We have Andrée's authority for the statement that children in Egypt, China, Siam, and Burmah are fond of spinning tops,[251] some Indians having top cords with three thongs.[252]

Skipping stones on ice, as all boys love to do, is dignified in Bavaria and Austria into a game called "Eisschiessen," in which heavy and carefully polished stone discs with a handle on top are slid over the frozen surface. Gutsmuths says:[253] "This game is played zealously in town and village, and the sturdy sportsmen allow no stress of weather, no untoward circumstance, to interfere with this their winter's fun. Even the boys have their ice sticks to beguile the way to school. High and low take part in the healthful sport; and as in the Tyrol the village pastor must not fail in archery, so here he enters the lists as a matador of the icy course." The Scotch use for the same purpose semispherical curling stones from twenty to thirty kilogrammes in weight, and provided with an iron or wooden handle.[254]

Skipping and bouncing, which again call forth the impression of life depending on our own exertions, are prominent in the two very popular and primitive games in which the ball and disc show us another side of their Protean adaptability. One consists of throwing the ball to the floor with such force that it rebounds, and meeting it with a blow as it comes up so that it is struck back again, and the process is repeated indefinitely. Swiss girls sing a little verse in time with the strokes:

"Bälleli ufe, Bällile abe
Gump mir nit in nasse Grabe!
Gump mir an en trockne Fleck,
Gump mir nit in nasse Dreck," etc.[255]

Niebuhr saw the children on the Euphrates playing the same game. The other amusement of this kind is skipping stones on water; the Greeks called it ἐποστρακισμός. Minucius Felix describes it graphically and with sympathetic insight: "Is lusus est: testam teretem jactatione fluctuum levigatam, legere de litore; eam testam plano situ digitis, comprehensam, inclinem ipsum atque humilem, quantum potest, super undas inrotare; ut illud jaculum vel dorsum maris raderet; vel enataret, dum leni impetu labitur; vel summis fluctibus tonsis emicaret dum assiduo saltu sublevatur. Is se in pueris victorem ferebat, cujus testula et procurreret longius et frequentibus exsiliret."[256] As many as fifty

German names for this sport might be enumerated, some of them showing pretty fancies and æsthetic personification. Fischart, of course, makes his Gargantua a master in this art too. He says in his quaint German, “Gargantua warff breyde Kiesestein am Gastaden schlimms aufs Wasser, dass es ob dem Wasser weiss nicht wie viel Sprung thaten.”[257]

(*d*) Throwing at a Mark

If throwing is, as many believe, an inherited impulse at bottom, then it must belong with the fighting instincts, since it gives a man the power to slay his enemy or his prey without actual contact with either. However that may be, throwing at a mark must have originated in such hostile use of the ability to throw at all, and it is significant that by far the most numerous and popular games of the kind require a target, and belong essentially to the male. Thus it may be questioned whether the whole subject would not better be treated in connection with fighting play; but it seems to me that consciousness of the fact that the target is a symbol of an opponent or of prey hardly forms any considerable element in the satisfaction derived from the sport, and for that reason I deem it fitting to notice it briefly in this connection. Moreover, its biological significance is more extensive than is that of mere belligerence, for it promotes to a higher degree than almost any other play the concentration of attention and the capacity of the organism for swift and sure reaction.

It is easy to see how, with children, throwing at a mark naturally follows simple forward throwing. Perhaps we get a hint of how this comes about from their intentional throwing of objects to the floor with a view to producing a noise, for the floor is then in some sense a goal, though there is as yet no specialization. From my own observation I should say that the first suggestion of the possibility of striking intentionally often arises from the pretence of some older person that he is badly hurt by the falling or rolling object, whereupon the heartless little creature at once tries to repeat the attack, this time with malice aforethought. Further development of this capacity is rather hindered than furthered by the child’s learning to run about; indeed, it is commonly the sixth year or later before he begins to be interested in such games, a manifold variety of which is handed down by tradition.

In this case, too, I can but touch upon a few principal groups, and illustrate them with examples chosen from the wealth of material at hand. In many games the object is to hit a comrade with a ball. In one very popular at Heidelberg all the boys’ caps are placed in a straight row on the ground, and the chosen king

throws his ball on one of them, whereupon its owner must instantly seize the ball and hurl it after his fleeing comrades. This comes very near to fighting play, as does another game, which takes the form of pelting some object set or hung up for the purpose, or something in motion.[258] Many games are founded on this principle, from throwing stones at a flowerpot or fruit hanging on a tree up to tenpins, which has been introduced of late into Egypt, and shooting at a target with blowpipe, lance, bow, crossbow, or rifle. An early developed, though, it is true, not purely playful, form of this sport is set forth in a beautiful Greek epigram called the Plaint of the Fruit Tree, which may be thus paraphrased: "Truly they have planted me here by the roadside as an unhappy target for all the playful boys to throw stones at! And how the destroying shower has rained down and torn my blooming crown and broken all my branches! The tree can be of no more use to you with all its harvest ruined. Alas! here have I, most miserable one, borne all this fruit to my own undoing."[259]

A modification of such plays consists in throwing one missile after another of the same kind, as a ball after a ball, a quoit after a quoit, etc. Thus Burmese children play Tschapieh-Kasah by throwing flat seeds on one another,[260] and many of our own games are essentially the same, especially those played with marbles. These little toys are very generally used, and are quite ancient. Bastian saw them in Burmah and Siam, where the game is called Leu Thoi-Kong.[261] It is popular all through the Orient, and extends to Africa. In old German burial urns, "with the bones of children are found polished round stones, such as modern children play with."[262] The Romans called marbles ocellata. They are frequently mentioned, too, in old German literature,[263] one instance being of pedagogical interest. In the sixteenth century the sumptuary laws of Zurich included one forbidding marbles among other plays, under penalty of the "Gätterei." And what was this punishment? The youthful criminal was placed in a revolving wooden machine and whirled until the crisis of dizziness and nausea was reached![264]

Very common, too, are the games in which small discs are thrown one after another. The Greek στρεπτίνδα was an attempt to propel a quoit or coin lying on the floor by means of another thrown toward it. Forbes describes a peculiar form of the game as practised in Sumatra: "All day long the boys under my window amused themselves with a game called Lepar, which interested me very much.... Each player had a sort of quoit made of cocoanut shell, which he threw from a special stand and tried to hit one or more (according to the number of players) of the other quoits lying at a distance of forty or fifty feet.... The manner of

propelling the missiles was remarkable. The player turned his back to the goal, laid his quoit flat on the ground, seized it firmly between his heels, and with a rotary motion of his legs shot it forward so that its rim described a cycloidal curve. It was amazing to see with what certainty the best players reckoned on the amount of force necessary for perfecting such a curve as would pass in among the quoits and hit the ones aimed at."[265]

In the Greek game κυνδαλισμός the object was to dig up with one pointed stick another which was fixed in the ground, and to do it in such a manner that the first stick was left standing up where the other had been. Fischart and Rabelais mention this game.

Still another kind of play belonging to this class (and at this point all connection with fighting play is severed) consists in rolling or throwing the projectile into or through a hole. The familiar game of marbles with holes was known to Greek children, and was called τρόπα. The same principle, too, is employed in the old-fashioned billiards in those games requiring a ring into which the ball is rolled. For other games the ring is made on the ground, as in this described by Nordenskiöld: "Several stand in a circle and take turns at throwing a short tapering iron rod, the object being to cause the iron to fall on its sharp end within the circle and stand upright."[266] In croquet the balls must roll through wickets. Throwing balls through the open mouth of a figure carved in wood was a mediæval diversion, and Eneas Silvius wrote in 1438 that the youths of Basel hung an iron ring on their playground and amused themselves with batting balls through it.[267] In Genf, little metal balls were tossed through holes bored in the head of a cask.[268] We have a classic description of such a game in Storm's Schimmel-reiter, where Hauke Haien wins the victory under the eyes of his beloved: "Then it flew like lightning to Hauke's arms. He stooped a little, turning the ball two or three times in his hand, and as he took aim deathlike silence reigned. All eyes followed the flying ball as it hummed along, cutting the air. Suddenly, far away, the silvery wings of a seagull gleamed, and her thrilling cry sounded from the dikes, but in the same instant the ball crashed into the cask, and all the people cried out 'Hurrah for Hauke!' while the word ran through the crowd, 'Hauke Haien has won the game.' But he, as they all crowded toward him, reached out for but one hand. She cried, 'What is the matter, Hauke? The ball is in the cask!' He only nodded, and did not stir from the spot. It was not till he felt the little hand fast clasped in his own that he spoke. 'You must be right,' he said, 'I do believe I have won.'" Finally, I will recall Ulysses's marvellous feat in the presence of the drunken suitors, when on his return home he sent an

arrow through the ears of twelve oxen standing in a row.

In our last division of this class of games the projectile must cling to the target. Everybody has tried to throw his cap on his head or a peg, and jugglers and clowns give us numberless examples of feats belonging here. One game is played with rings hung on a stick, or caught with a hook, or thrown on an upright stake. At fairs the lucky player gets a prize for tossing rings on knives. Play of this kind has been used by a brilliant American journal to point a satire on American bidding for European titles. The ambitious damsels stand in front of a brightly lighted booth, in which numerous manikins of repulsive appearance, with their armorial bearings suspended round their necks, are ranged on exhibition, and attempt to throw engagement rings over the heads of these figures.

6. *Catching*

Catching and holding moving objects is the direct opposite of throwing, and the two are best understood by being contrasted. Catching, too, is the complement of throwing; the object which has been set in motion, animated, as it were, by human power, comes to our hand to get new life. In no way can our supremacy over matter find more satisfactory expression. It is with difficulty that children learn to catch, for the direction of their necessary motions by means of sight requires so much time that the moving object passes to another place before the hand is ready to seize it. The child usually practises catching a ball rolling on the floor first, then holds up its dress or apron or two hands placed together to form a cup into which the ball thrown skilfully through the air will drop. Many such attempts are required before the art is acquired of controlling the muscular innervation to meet the still distant moving object.

While there are various objects employed in such play—as, for instance, in the Greek πενταλιθίζειν there were five pebbles, bits of china, or what we call jack-stones, thrown up with one hand and caught on its back, and in the beautiful game of magic rings, and trials of skill with sticks, knives, watches, etc.[269]—still the ball is the most perfect and suitable plaything, partly because it is easy to grasp from any direction and partly on account of its lightness and elasticity. It is equally well adapted to solitary or social play. When alone, the player throws it with a view to its return to the starting point, whether its course be perpendicular or a rebound. A game of skill popular with girls consists in throwing the ball, and before it has time to descend taking another ball from a table, then catching the first one with the same hand.[270] In bilboquet, which was played by Henry III

of France, and is known to many primitive peoples, as, for instance the Eskimos, the ball is caught in a cup, to which it is attached by a string. The games are much more varied when two or more play together at throwing and catching, though in that case experimentation is usually transformed into a contest. The kadokadoka of the Gilbert Islanders illustrates a simple and universally known form. Women play it by standing in two opposing lines and throw the ball, which must never be allowed to drop, back and forth.[271] In the Greek οὐφρανία σφᾶιρα the ball was thrown as high as possible, and the contest was over who should catch it, or, if only two were playing, in the agility of the leap for it, as in the Odyssey. The victor must throw the ball aloft again before his feet touch the earth. A game practised by the Indians is apparently of a similar character. "The beginner of the game holds a rather hard ball in his hand, throws it directly up, and attempts to catch it. This is by no means an easy task, for around him stands an eager circle each with hands outstretched to seize the ball. The successful one rushes to an appointed goal, while the others try to hinder him."[272] The game in which one boy rides on another's back to throw the ball is illustrated in an Egyptian wall picture, and Bastion saw it also in Burmah. In this, imitation becomes prominent, as does the element of rivalry, where the boys vie with one another in clapping, kneeling, and going through various motions before catching the ball. In most games where the ball is struck the contest develops after it is caught. In playing trapball, the ball is placed on a springboard and sent aloft. All try to catch it, and the victor must bounce the ball until he is supplanted by another. In England, trapball can be traced back to the fourteenth century. Strutt gives an illustration of the spoon-shaped board then used.[273]

In closing these remarks on movement-play we will notice briefly the distinction implied in our use of the word "sport," since many of the games which we have been considering are so designated and practised by adults. What is it that converts play into sport? Preeminently the seriousness, the stress of earnestness with which it is pursued. Yet this statement is too general, for children too, as every one knows, are deeply earnest about their play, which does not on that account become a sport; and a man may play billiards or chess with such perseverance and zeal that his game becomes the principal event of his daily life, and yet he is not called a sportsman. We must evidently find a more specific definition. The fact that in the merest play all sorts of acts and achievements are involved which are not, as such, playful, but rather preparatory for play, may help us to this. In the eyes of adults the interest of a game lies in the construction of a theory for it; they busy themselves with perfection of form in play, with the rules of the game, with practice and training, with the proper outfit and suitable

costume, etc. Only he who does so assiduously busy himself is a genuine sportsman, according to this theory. We may then define sport as play pursued reflectively, scientifically. This accounts for the fact that children are never sportsmen, despite the immense importance of their play to them, and that the mountain climber whose highest ideal is to conquer the heights, or the chess player who devotes all his spare time to the game, is still not a sportsman.

III. Playful Use of the Higher Mental Powers

Rousseau, who dwells upon the fact that a man's education begins at his birth, illustrates clearly, if somewhat exaggeratedly (being under the influence of Condillac), the threefold biological significance of youth when he says in the first volume of Émile that if man came into the world full grown he would be "un parfait imbécile, un automate, une statue immobile et presque insensible." These words exactly fit into our subject and its classification. Having treated of the sensor and motor aspects of experimentation, we now proceed to examine its value to the higher mental life, where by its help man is rescued from the danger of remaining "un parfait imbécile."

The influence of experimentation is felt in the activity of intellect, feeling, and will alike. Of course all play, including the limited group which we have been considering, is of great importance to the whole mental make-up, since it acts in all directions, sharpening the intellect, exercising the will, and furnishing occasion for the discharge of emotion. But the special aim of the present discussion lies in the investigation of how far these powers of the mind are themselves the subjects of experimental play, and accordingly in what follows we shall not inquire as to the advantageous effect of play on attention, imagination, reason, etc., but will examine cases where these capacities are directly experimented with.

A. EXPERIMENTATION WITH THE MENTAL POWERS

If we ask ourselves what aspects of intellectual activity are most conspicuously subjects of playful experimentation we naturally turn to memory, imagination, attention, and reason. Our first subject for consideration, then, is memory, where again we must distinguish between simple recognition and reflective recollection.

1. *Memory*

(*a*) Recognition

Recognition is the link which connects the present with what we have known in the past. The new psychology repudiates the common idea that the present impression is compared with a memory picture of the past and the two recognised as identical, since it is not borne out by the facts. Neither the emergence of a genuine memory picture nor its comparison with the present object is demonstrable. When I select my own from a number of hats I simply recognise it, and can tell no more about it. But a careful study of cases in which the recognition is hesitating clearly distinguishes the two following stages. First there is the simple knowledge: I have seen this before, the recognition having been accomplished by the "Coefficient of Recognition"[274] (Höffding) without our necessarily knowing why we recognise the object. It is difficult to say what grounds this feeling. Physiologically there may be special reasons for the accompanying nervous processes. Speaking psychologically, there seem to be certain shadowy feelings of warmth and intimacy. In any case the content of the memory picture is genuine, though it does not stand alone, but blends with the impression of the moment by the process of assimilation.[275] A second stage is reached through the fact that we are able to place the object suitably; we know that we have had something to do with it, and this is often facilitated by a hasty reversion to its earlier psychic *milieu* of space and time relations, as well as of word and idea connections. When not too mechanical, as sometimes when dressing we put on everything in its right relation but without attention, recognition is pre-eminently pleasurable. Even the mere coefficient of recognition is accompanied with a mild satisfaction such as Faust experienced when after a foreign sojourn he found himself once more in his study. "Ah, when in one's own narrow cell the friendly lamp is burning." But much more intense is the effect of the second stage, for here comes in joy in accomplishing a task, in overcoming some difficulty, however slight. A short time ago I found on my table a fragment of porcelain decorated with gold. I knew it at once; the pattern was one I had often seen, but where? My glance accidentally fell on the curtain cord, and immediately I felt that the scrap must be from one of the porcelain knobs which it was looped on. The result was lively, almost triumphant satisfaction. The act of recognition being so pleasurable, we would naturally expect man to make use of it for its own sake—that is, experimentally. Aristotle, indeed, grounds appreciation of art in pleasurable recognition, and, while not going to that length, we must admit that the idea deserves consideration.

We have already spoken of visual recognition, which is a prominent division, and will now consider play connected with it. The earliest manifestations of pleasure in the perception of form recorded by child psychologists are no other than acts of recognition. In its second quarter the infant begins to recognise its mother and nurse. There is nothing playful about this, of course, but very soon experimentation becomes prominent as the same form appears in changed conditions with consequent uncertainty involving the stimulus of difficulty to be overcome. At six months Preyer's baby saw his father's reflection in a mirror, and made a sudden motion toward it.[276] The little girl observed by Pollock at thirteen months recognised pictures in a newspaper, calling out "Wah, wah" to the animals, trees, etc.[277] In Sully's beautiful experiment, made in the seventeenth month, the playful character is more evident. "The young thinker," he says in the diary, "achieved his first success in geometric abstraction, or the consideration of pure form, when just seventeen months old. He had learned the name of his rubber ball. Having securely grasped this, he went on calling oranges 'Bo.' This left the father in some doubt whether the child was attending exclusively to form, as a geometrician should, for he was wont to make a toy of an orange, as when rolling it on the floor. This uncertainty was, however, soon removed. One day C—— was sitting at table beside his sire, while the latter was pouring out a glass of beer. Instantly the ready namer of things pointed to the bubbles on the surface, and exclaimed 'Bo!' This was repeated on many subsequent occasions. As the child made no attempt to handle the bubbles, it was evident that he did not view them as possible playthings. As he got lost in contemplation, muttering 'Bo, bo!' his father tells us that he had the satisfaction of feeling sure that the young mind was already learning to turn away from the coarseness of matter and fix itself on the refined attribute of form."[278] At this time, too, the child begins to enjoy recognising things from their mere outline. Sigismund records progress in this direction at about the end of the second year. "They already know many things by the simple outline. My boy, who, by the way, has seen few pictures, recognised my shadow in his twenty-first month, being frightened for the first moment, then clearly delighted, calling out 'Papa!' and has probably not been afraid of any shadow since. On the contrary, he, like other children of his age, likes to watch shadow pictures,[279] especially moving ones." They soon learn to know the outlines of their own. How deeply must the essence of individuality be impressed upon them when these meagre outlines of a figure which they are accustomed to seeing filled out are sufficient for recognition! Perhaps for children who do not see pictures early, shadows serve to introduce the latter and explain them, just as, according to the Greek fable, they

led to the art of drawing. Children are so fond of looking at pictures that they often enjoy the representation more than the reality. “A house!” exclaims the little picture gazer delightedly when he comes to one, while he would hardly notice the real thing. Does this pleasure arise from the solving of a riddle, as Aristotle seems to say?[280] This would make the enjoyment of recognition identical with that derived from overcoming difficulties, and there can be no doubt that this is an important element in all art appreciation, if it be not, indeed, the very kernel of æsthetic enjoyment. In the enjoyment of a landscape, it is safe to say that for nine tenths of the observers the chief satisfaction comes from recognising the various peaks, villages, castles, etc., in the panorama. There is one more point. As soon as anything like a contest is involved, a stronger shock, a sturdier resistance to the act of recognition, a comic colouring is given to the enjoyment. Marie G——, who from the time she was two years old had a veritable passion for having things drawn for her, considered it a great joke when she could not make out what was meant without some effort. For older children and adults puzzle pictures are skilfully prepared with a view to rendering recognition difficult, and success is followed by triumphant laughter. Finally, it may be added that primitive folk are sometimes unable to see the meaning of photographs and other pictures,[281] a fact which makes their early recognition by children the more wonderful. On the other hand, I recall Charles de Lahitte’s observation of an imprisoned Guayaké, (a little-known and utterly uncivilized tribe of southern Paraguay) which proves that the very lowest savage may recognise a photograph and be overjoyed with it. “He recognised his picture after some instruction, and broke out with expressions of pleasure and astonishment, crying repeatedly as he slapped his body, ‘Gon, gon!’ which equals ‘me!’”[282]

Acoustic recognition, too, is more important and significant for art than one might at first suppose. We find even in children who repeat a simple melody indefatigably that pleasure in repetition forms a psychological basis for a physiological impulse, and in the musical pleasures of adults this feeling is much stronger.[283] The playful feature is emphasized when acoustic conditions vary, as in changed pitch or some other modification, so that overcoming difficulty enters. Potpourri and variations are instances. In Wagner’s music there is a peculiar satisfaction in the emergence of a leading motive from the overwhelming mass of tones; like a friendly island rising in the midst of surging seas. All modern music, indeed, is evolved from the intricacies and modifications of such acoustic play; to follow them and identify the unity in variety is a pleasure which grows with the hearer’s technical appreciation, until

at last, in fuguelike movements, actual beauty is subordinated to the artfully ordered formal features of the composition.

In poetry, playful repetition takes manifold forms,[284] such as rhyme, alliteration, and that chainlike reiteration of words referred to earlier. But still more ingenious and charming is the device of bringing the repetition so close on its own heels that the first impression still dwells in the mind when the second demands attention. Pure enjoyment of repetition as such is simplest when the same or similar forms are separated by a long interval, allowing the first impression to sink below the threshold of consciousness before its analogue appears. A passage of this kind occurs in Goethe's poem quoted above, "O gieb vom weichen Pfuhle," etc., and is still better illustrated by the similarity of the second and eighth verses of a triolet. Take this of Gleims:

"Ein Triolet soll ich ihr singen?
Ein Triolet ist viel zu klein,
Ihr grosses Lob hineinzubringen.
Ein Triolet soll ich ihr singen?
Wie sollt ich mit der Kleinheit ringen,
Es müsst' ein grosser Hymnus sein!
Ein Triolet soll ich ihr singen?
Ein Triolet ist viel zu klein!"[285]

It is but a step from this to the familiar and primitive refrain.[286] To serve this purpose, interjections, single sounds, words, and sentences are repeated after so long an interval that there can be no question of sensuous enjoyment; it becomes mere repetition. As the soothing satisfaction of a melody is produced by dwelling on the keynote, so with the refrain. This principle is even more strongly brought out in the turn, which is so prominent a feature in much lyric poetry, and also in the form originating in Spain and Portugal in which a single verse of a familiar stanza is made the keynote of a new poem. This is play to the producer and hearers as well. Such analogy of lyric form to musical variation as is shown in the "freien Glosse" actually deserves to be called variation itself.[287]

In the imitation of particular sounds poetry offers further indulgence to the enjoyment of repetition, to the amusement of adults and delight of children. This is really imitative play and as such belongs to a later division of our subject; yet for the listener it is also an exercise in repetition, and is conspicuous in many refrains. Minor says: "The imitation of musical instruments by means of articulate or nondescript sounds is common in folk songs. The shepherd's pipe, the horn, trumpet, and drum are introduced in pastoral, hunting, and military pieces."[288] Children are especially partial to the mimicry of animals, and some

of the formulæ have become traditional. The German robin sings, it seems,

"Buble witt witt witt,
I will dir e Krüi-zerrle gean."

The sparrow says "Twitter, twitter"; the quail "Bob White, peas ripe?" the cackling hen in English, "Cut, cut, cadahcut," and in German "Duck di duck Alli Stuck Unter mî Ruck."

Finally, we must not forget a very popular game founded on recognition. A whole company will dance around a blindfolded person until he hits on the floor with a stick, whereupon they all stand still, and he touches one and attempts to identify him by the sound of his voice, having three trials. Sometimes the sense of touch is allowed to assist the recognition, as in blind-man's-buff and the Greek μυίνδα.[289]

(*b*) Reflective Memory

Playful exercise of the recollective faculty, dependent on the enjoyment of reproduction as such rather than on any quality of the memory picture, is confined almost exclusively to children, and indeed to those not yet of the school age. From about the third year[290] to the end of the sixth, when enforced mental exercise is begun, we find in children outspoken satisfaction in the voluntary exercise of reproduction. During this time mental feats almost unachievable by adults are performed, such as learning by heart thick books of nursery rhymes, long poems, interminable stories—acquirements which stir the proud parents with hope and mistaken conclusions as to the extraordinary mental endowments of their offspring. That children of this age often burden their minds with lists of unconnected and meaningless words and take pride in reciting them, proves that enjoyment of the mere ability to do it is the chief incentive. Thus, when she was in her sixth year, Marie G—— learned to count in French from one to one hundred, and enjoyed going over the numbers when she supposed herself to be unobserved, as when lying in bed in the morning. Carl Stumpf's report of the prodigy Otto Poehler,[291] who at two years of age had learned to read fluently without teaching, is highly interesting in this connection. Stumpf says of the boy, then four years old and in other respects normal, having, indeed, a decided disinclination for systematic education when others tried to impose it on him: "Reading is his greatest passion, and the most important thing in his life. He knows the birth and death year of every German Kaiser from Charles the Great, as well as of many poets, philosophers, etc., and can tell the birthday and place of most of them. Besides, he knows the capitals of most countries, and the rivers

on which they are situated, etc. He knows all about the Thirty Years' War from beginning to end, with the leading battles of this and other wars. According to his mother's statement, he has acquired all this without aid, and by diligent study of a patriotic almanac and similar literature about the house, and from deciphering monumental inscriptions in the city, an amusement which he dotes on. I myself can witness to the lasting impression which such facts make on his mind. At the Seminary I showed him pictures of Fechner, Lotze, and Helmholtz, mentioning their full names. Of each he asked at once when and where he was born and died, and some days later could give not only name and surname of every one, but the full date of birth and death, mentioning day, month, year, and place." Since Stumpf tells us that there was no trace of vanity or a desire to show off, we must explain these accomplishments as the result of the child's desire to experiment playfully with his own mental powers.

In assigning such play chiefly to the period between the third and sixth years, I did not by any means intend to imply that it is suspended thereafter. It is, indeed, often seriously impeded by the compulsory methods common in our schools, yet it does not entirely vanish. Lessing is a brilliant example of the scholar by whom even erudition may be turned to playful account, and who is able to assimilate every kind of pabulum that falls in the way of his omnivorous brain. When the teacher is able to direct his pupils to the discharge of their tasks with interest and pleasure, there may still be something playful about the mental exercise of school work. Subordination to authority does not exclude play so long as the obedience is voluntary. Children never submit so absolutely to any one else as to a leader among their playfellows. Fénelon was not far wrong when he said: "The common way of educating is very mistaken—to place everything that is pleasant on one side and all that is disagreeable on the other, connecting the latter with industry and study and regarding the former as waste of time. How can we expect anything else than that the child will grow impatient of the restraint and run to his play with the greatest eagerness?"[292] Those who, on the other hand, protest against making play of instruction are mistaken in supposing that it is thereby turned into a jest, for we well know that play can be prosecuted with great zeal and earnestness. Yet they are not altogether wrong, for it is most important to impress the necessity for doing what is repugnant to us, and for this merely playful study, even if it accomplished all else that we want, would always be inadequate. Finally, with regard to the adult: it does occasionally happen even in our rushing times that some one commits a poem to memory with the avowed intention of giving exercise to his mind. Were this practical end the only one, play, indeed, would not be involved; but, as a rule, pleasure in acquisition as

such is combined with the other motive. Such exercise was formerly much more common, and at a time when few could read surprising feats were performed. A survival of this may be found now in the Balkan countries, where the heroic songs are still orally preserved. In mental exercise of this kind it is difficult to draw the line between the emotions aroused by the content of the piece and what pleasure is derived from the act of learning, and we will not here go into that phase of the subject, only mentioning, in closing the section, that conjuring up one's own past is another form of memory-play with the feelings.

2. *Imagination*

The phenomena which the exigencies of language compel us to include under the words imagination or fantasy naturally fall into two quite clearly differentiated groups, namely, illusion, either playful or serious, and the voluntary or involuntary transformation of our mental content. Considerable controversy has arisen as to which of these groups shall be taken as the basis of a definition, and it is in opposition to the prevailing view that I have designated the capacity for illusion as my choice for that purpose. Yet on reflection I consider it more prudent not to attempt a comprehensive definition, but rather to keep separate the two distinct departments of mental life which the usages of language too closely associate, and which, while they are closely interwoven in some of their aspects, are yet of so heterogeneous a character that we may hope to distinguish between them in all essentials.

(*a*) Playful Illusion

This heading includes all those manifold cases in which mental presentation is accepted as actual, whether they are concerned with genuine memory pictures or merely some mental content worked up for the occasion. When a fever patient sees an absent friend bodily before him, we call this imagination as well as when he seems to see absurd or grotesque things. The distinguishing feature is whether the illusion appears as a substitute for reality, as in dreams, delirium, hypnosis, and insanity, or as the product of conscious self-deception (K. Lange's "bewusste Selbsttäuschung," P. Souriau's "illusion volontaire"), where the knowledge that we have ourselves produced the illusion prevents actual substitution, as in play and art. Transition from one to the other of these states is easy. The dreamer or fever patient may have the feeling that the fantasy in which he lives and suffers is, after all, an unreal thing; and, on the other hand, illusion is often so strong for playing children and artists that it forms a perfect substitute for reality. Just now we are concerned with conscious illusion only. In inquiring how far

experimentation is involved in it we must bear in mind that there are two sides to all illusion, one which has reference to an internal image, and the other blending with external phenomena. It is a distinction similar to that between hallucination and illusion in the narrower pathological sense.

The illusion which depends on internal images can, as we have seen, elevate actual memories as well as convertible mental contents to the appearance of reality. So we see that the two kinds of mental activity included under the name imagination are intimately and variously related, while neither alone covers the entire ground. Enjoyment of play with memory pictures which are more than ordinarily faithful to fact is practised almost exclusively by adults, and more especially by the aged. The psychological condition of this is that by means of strong concentration of attention on the mental picture (we are reminded again of hypnosis) the actual present is thrown very much into the background, and the past thus conjured up loses many of the usual characteristics of a past, since the memory picture, from lacking the usual projection, assumes the expression of reality. The following is a beautiful example of this distinction between mere reflective memory and playful illusion where the differentiation was gradually built up. When Goethe as a mature man took up his Faust manuscript, he said to himself, “I thought over this subject a great deal ten years ago; but that would be only a memory.” Yet as he lost himself in the joyful or painful memories connected with that period, he came to ignore the fact that they were long past, and more and more substituted them for the present, which in its turn became gradually submerged. These words reveal the play of his imagination:

"My pulses thrill, tears flow without control,
A tender mood my steadfast heart o'ersways;
What I possess as from afar I see,
What I have lost is the reality to me."

Miss Swanwick's translation.

A strange characteristic of these playful reminiscences is that what displeased us at the time of its occurrence may give pleasure when revived by memory. When, for instance, a traveller recounts his adventures on a mountain tour he takes pleasure in dwelling on the hardships which he endured. Is this entirely due to the knowledge that it is all over now? I think not. First comes self-congratulation on having borne such grievous difficulties, i.e., the feeling of power which we find to be the chief source of satisfaction in almost all play.

Playful pretence[293] that the personified and elaborated mental contents are real is psychologically important to productive artists, and still more so to the enjoyment of poetic creations. Artists often refer to their as yet unembodied conceptions as to very real things, and frequently these assume the rôle of relentless taskmasters or of veritable demoniacal possessions. Then, of course, they cease to be playful. A. Feuerbach writes: "If it were not for this Gastmahl I would be happy; but it pervades everything and gets in my way. It haunts my thoughts. It feeds on my heart's blood and saps my inmost life."[294] Yet the artist often exults in the fact that he has a self-created world all his own—he plays with the illusion. "It would concern the reader little, perhaps," says Dickens about his David Copperfield, "to know how sorrowfully the pen is laid down at the close of a two years' imaginative task; or how an author feels as if he were dismissing some portion of himself into the shadowy world when a crowd of the creatures of his own brain are going from him forever. Yet I have nothing else to tell, unless, indeed, I were to confess (which might be of less moment still) that no one can ever believe this narrative, in the reading, more than I have believed it in the writing." This sort of illusion is essential to æsthetic enjoyment in hearing or reading poetic creations. The child who listens absorbedly to a fairy story,[295] the boy for whom the entire external world sinks and vanishes while he is lost in a tale of adventure, or the adult who follows with breathless attention the development of a captivating romance; all allow the authors' creations to get possession of their consciousness to the exclusion of reality, and yet not as an actual substitute for it.

In a second kind of conscious illusion the mental content blends with actual external phenomena and shares in their reality. Here, according to Wundt's terminology, we have a kind of simultaneous association which is very like the

imagination that transforms reality. Each of our ordinary concepts is a mixture of sensuous impression with its associated memory picture, and it first becomes illusion when the association assumes the character of hallucination, and is susceptible of correction by an appeal to common experience. When a white spot dimly revealed by the moonlight appears to me as unmistakably a towel, I see more than sense-perception warrants; but when I firmly believe that it is a white-robed figure, then I have fallen into an illusion, and, as they say, my imagination has played me a trick. Yet there are degrees of difference between serious illusion and the playful kind which concerns us here. When I had fever, as a boy, I saw on the bright coverlet the most marvellous feast spread out, and at the same time had an amused consciousness that it was all an illusion caused by my illness. Von Bibra's experiences from hasheesh-smoking were quite similar to this, as he tells us in his book previously cited. In this are two distinct kinds of play, first the substitution of an image for its original, and second the lending, as it were, of our own personality. The first has been treated exhaustively by K. Lange in his study of conscious illusion. Not only the little girl who makes a favourite baby of a knotted handkerchief or some other formless object, and the boy who calls a stick a horse, a pile of sand a mountain, a collection of chairs a railroad train, etc., but also the adult in his enjoyment of plastic art and scenic effect, using his own mental content to verify the appearance, is making playful use of his capacity for illusion, and he, too, takes pleasure in so doing. Lending one's own personality reveals illusion as operative in another direction; here we impart our own mental states to the object under consideration; we "lend" to it the emotions which we conceive would be ours under like conditions (the shoe is made to fit the last). From our feeling of sympathy or inner imitation we then experience all the resulting states of mind, cheerfulness and brightness from what is attractive, or solemnity from the sublime. In speaking of imitation we shall have occasion to refer to this again.

(*b*) Playful Transformation of the Memory-Content

Simple recollective processes by no means give an adequate picture of reality. In the tenth chapter of his book on illusions Sully gives such a list and description of important mental illusions as is calculated to shake our faith in the trustworthiness of memory. It seems that our recollections are often mere fragments of a formerly well-known whole (we may recall, for example, only one or two features of an acquaintance), and as a result of this analytic process we are prone to make new combinations of the detached elements. Thus, a short time ago I thought that I could clearly picture to myself the house of my brother-

in-law by the power of association, but I afterward discovered that I had conceived the bricks to be far too bright a red, and had evidently substituted the colour of some other house. What we call constructive imagination then turns out to be constantly renewed manipulation of previously verified impressions. We need not here touch upon the wide field of involuntary productive imagination, since it is only play directed by the will that is engaging us; yet before going on to concrete cases, it should be stated that in constructive imagination as well the pictures formed are to a considerable extent involuntary, the will aiding more by its influence in concentrating the attention on the trend of the internal processes and in discriminating between them, than in forming the picture itself. This is why the efforts of great artists are so often like inspirations.

Building air castles is the simplest exercise of constructive imagination.[296] It most commonly manifests itself as voluntary playful forming of cheerful and ambitious images of ourselves or our friends amid the most fortunate surroundings.[297] We may see how it is done by watching little children who have enjoyed a new kind of treat at a birthday party or some such occasion—how they will remember and repeat it in their future plays. All the details will be copied sometimes just as in the model, sometimes in new combinations, or turned into a joke. The inestimable value of such play for making life worth living is self-evident. It veils the sordidness of everyday existence with a double illusion, the first being our conception of the air castle as a reality, and so getting immediate possession of this radiant dream (here the two kinds of imagination converge). Such illusion supplies the psychological interest in Faust's bargain; he enjoys the "schönsten Augenblick," although his present satisfaction is merely premonitory. The second illusion is exemplified in our implicit trust that the future will verify our hope,[298] that buoyant and vivifying emotion which accompanies us all through life.

Conjuring up all sorts of hindrances, difficulties, and dangers is a modification of this castle building, and gives more play to the intellectual faculties as we weigh the varying possibilities of success or failure, develop the probable consequences of a proposed step, and try to find the best and easiest road to success. By such processes the crude picture is moulded into shape. Here, again, the capacity for illusion is of importance in connection with imaginative combination, since each possibility that is considered has the appearance of reality in its turn, but such mental activity is playful only when the combinations as such are enjoyable. Every creative artist, statesman, writer, or scholar must often work on an imaginative basis which he knows he can never verify. Many

persons like to take, with the help of a Baedeker, long journeys which they can never hope to indulge in in any other way, and to solve complicated problems based on hypothetical games of chess.

Leaving castle building, let us see what other forms of constructive fantasy can be practiced playfully. In speaking of illusions we have noticed the blending of memories with external phenomena, which is so conspicuous in child play and in æsthetic enjoyment. The process of "assimilation" which grounds playful self-deception is so closely related to constructive imagination that it is difficult to locate the boundary between them. The psychic process which transforms a splinter into a doll's milk-bottle, a few chips stuck up into men and trees, a cloud[299] into the greatest variety of faces, animals, etc., which endows lifeless objects with our own spiritual capacities of desire, emotion, and temper—all this is synthetic activity which may quite as well be called assimilation as constructive imagination. Its pleasurable quality is inherent,[300] especially where a perfect imitation of reality would give us so little room for the exercise of imagination as to be on the whole less satisfactory.

Constructiveness which is concerned purely with ideas, not blending them with external objects, is quite as important. One of its uses, though one not clearly defined, may be to direct the attention, when there exists but a vague idea of the completed picture, to a choice among the multifarious internal images which make up the material supplied by memory. This process is of the greatest importance in the origination of artistic compositions, but its relatively simple beginnings may be clearly traced in the play of children. While we may not hope to follow the imaginative process into all its ramifications and refinements, nor to account for individual variations in memory content, visual, motor, etc., three general, constantly recurring forms of its constructive activity are distinguishable: 1. The conjunction of concepts which are not connected, or not so connected in reality. 2. The abstraction of certain elements from a complex and their transference to other combinations. 3. Exaggeration and depreciation. It will be readily seen that these three forms of imaginative activity are useful for playful experimentation as well as in actual artistic production, which, however, rarely makes playful use of fantasy.

The first of these activities is often so capricious in children that it can hardly be called experimentation; it seems a mere disconnected succession of fancies and self-originated images, very much as in the case of mania and other abnormal states. Strümpell's little daughter, aged one and a half years, is responsible for the following: "Go gramma and buy a pretty doll gramma for me under the bed

for me to play the piano. Bring papa golden sheep; take mamma's white sheep too. Go on, there, driver, gramma is going. Get up, Klinglingling. Gramma comes up the steps. Oh, oh, ah, ah, lying on the floor, all tied up, no cap on. Theodosia [her doll] lie on the bed, bring yellow sheep to Theodosia. Run, tap, tap, tap for Lina. Strawberries, gramma, wolf lie on bed. Go to sleep, darling Theodosia, you are my dearest; everybody is fast asleep. May makes the trees green—let me—on the brook violets are blooming—I want to go to walk. A cat came in here, mamma caught it, it had feet and black boots on—short cap, band on it. Papa ran—the sky—gramma gone—grampa resting," etc.[301] In this, attention seems to be entirely lacking, so that there can not be said to be any aim, however indefinite. Genuine constructive imagination is more apparent in the attempts of small children to tell stories. I have the following note on Marie G ——, made at the age of three years and one month. She insisted that I must lie on the lounge after she had gone through the motions of "making the bed." Then the little mother warmed the gruel in a heavy cigar cutter, made me drink at the peril of my teeth, and ordered me to shut my eyes. Then she seated herself, pretended to sew, and told a story to put me to sleep: "The other day I went down town. There were beautiful shops and there were flowers. Anna [her doll] wanted to pick one, and a bear came up. All my six children were dreadfully scared and hid in the bathroom stove, and I locked the door and took out the key, and the bear went away; and I was so frightened!" It was evidently her intention to make a connected story, although the first situation, the scene down town, was transferred to a different one without any proper transition. Yet the various processes are easily traced in spite of their complexity. First, the idea of the city where the romancer takes her doll, as she was often taken by her mother. The memory picture of the florists' shops which led to an overweening desire on the part of the doll to take a flower. Then judicial wrath appears in the frightful shape of the bear, and at once the whole situation is changed; there are now the six children of the familiar tale, who hide. But where? In our bathroom stove (an improvement on the tale), which develops a lock and key for the occasion (confusion with the attributes of a closet door). Here, then, are divisions 1 and 2 clearly defined—namely, the combining of complex presentations, and the detachment and transposition of some features. Analogy with artistic methods is too obvious to need enlarging upon.[302] An interesting example of the inventiveness of an older child endowed with genius is the voluminous romance which the young Goethe used to tell again and again to his playmates, and has transcribed in his biography. It will be seen that the imaginative process is much less easily traced in it than in the earlier instance.[303]

One important branch of imaginative composition is the picturing of the fantastic creatures of mythology, such as animals with human heads, mermaids, and the grotesque blending of animal and vegetable life, yet with the essential features taken from Nature. As Dickens says of his characters, that, being made up of many people, they were composite,[304] so with these creations. The following dialogue of Marie G—— with her doll near the end of her fifth year will illustrate the use of this faculty in the case of concepts which transcend the limits of actuality. “So, little sister Olga, you have come in from your walk. Tell me about everything that you saw. A little lamb, a cow, a dog, a horse. Yes, and what else? Blue bells and green primroses and red leaves—but that can not be; you are fibbing, my little sister.” Such playful and grotesque combinations are often introduced in art, but they no longer appeal to superstitious fear. In the temptations of St. Anthony, in Oriental tales of strangely deformed men, in the taste for grotesque gargoyles and other ornaments, we find instances. In some fantastic creations the imagination is given unbridled license, with the result that the production acquires more of the characteristics of play.[305]

The third division of constructive fantasy, comprising exaggeration and depreciation, is also an object of playful activity. All children delight in giants and dwarfs, whether because they excite pleasurable emotions by their disproportionateness, which appeals to the comic sense, or whether it is the strong stimulus of what is unusual that accounts for the attraction. Marie G—— improvised a rare tale when she was five and a half years old, which well illustrates exaggeration, as well as conscious illusion and imaginative combination. The child was lying in bed in the early morning with a copy of Grimm’s tales, and pretended to be reading from it. “Once upon a time there was a king who had a little daughter. She lay in the cradle. He came in and knew it was his daughter, and they both had a wedding. As they sat at the table the king said, ‘Please draw me some beer in a big glass.’ Then they brought a glass that was thirty yards high, and went to sleep; only the king stayed up as a watchman. And if they are not dead they are living there yet.” Of course the child had no clear idea of how high this glass would be, but she evidently pictured one whose size far transcended the limits of reality—of this I subsequently satisfied myself. Adults are constantly using this sort of imaginative exercise in a playful way in verbal exaggeration. The talk of students and of girls abounds in superlatives, and they are employed by satirists with telling effect—so much so that the recounter himself is sometimes deceived by his own extravagance. Schneegans says in his interesting book: “The grotesque satirist is often carried away by his own work, and gradually loses sight of his original aim; ... and finally the

conclusion is forced upon us that the writer has yielded to his passion for gross exaggeration." This is certainly true of Rabelais, when he says that Pantagruel had but to put out his tongue to protect his whole army from the rain, or that his arrows were as large as the beams of the bridge at Nantes, and yet with one of them he could shoot an oyster from its shell without breaking the latter; or when he describes the people who needed no tailor, since one of their ears served as hose, doublet, and vest, while the other was used like a Spanish mantle. This last morsel recalls some of the folk tales which have amused the masses for more than two thousand years. While we may not lightly affirm that the grotesque extravagance of some of these stories is always due to imaginative play, yet we can trace it in such of them as the Greenland myth of little Kagsagsuk, whom the men lifted by the nostrils until they grew enormous, while the rest of his poorly fed body remained as small as ever, and in the account of his subsequent marvellous strength. Kagsagsuk divided the mob as though it had been made of little fishes, and ran so vigorously that his heels hit the back of his neck, and the snow flying up around him made shining rainbows.[306]

Playful lying should be mentioned along with other forms of exaggeration. Children's lies have been studied carefully of late years, and the conclusion is general that they are usually playful. Untruthfulness must be playful when it is indulged in merely to tease others or to get amusement from their credulity, or to heighten the recounter's sense of the marvellous.[307] Only such examples are useful for our purpose as find their chief incentive in the enjoyment of invention. Compayré rightly calls this experimentation, and says that children play with words as they do with sand or blocks.[308] The real stimulus which lying affords to imaginative activity is best demonstrated in the progressive lie: "I have thirty marbles; no, fifty; no, a hundred; no, a thousand!" or "Je viens de voir un papillon grand comme le chat, grand comme la maison."[309] One of my nephews, Heinrich, was a great romancer, and the same peculiar, almost divergent fixing of his eyes characterized him then as when listening to a marvellous tale. At three and a half years north Berlin was the scene[310] of his inventions, a name which the little Stuttgarter had in some way picked up. There he had seen fish resembling sharks with boots on their feet. On one occasion he related the following: "In north Berlin hares and hounds are on the roofs; they climb up on ladders and play together, and then—and then—comes a telephone, a long wire, you know, and on that they come to Stuttgart. That's the way they get here."[311] It is easy to see the connection between this and rudimentary artistic production. Guyan says:[312] "The lying of children is usually the first exercise of their imagination, the first evidence of the germ of art." Such playful experimentation

is, of course, quite different from actual deception. Perhaps nowhere is finer discrimination in this direction shown than in Goethe's remarks on his boyish story-telling: "It greatly rejoiced the other children when I was the hero of my own story. They were delighted to know that such wonderful things could befall one of their playfellows, and yet they did not seem to marvel that I could play such tricks with time and space as these adventures implied, for they were well aware of my goings and comings and how I was occupied all day long. None the less I must choose the scenes of these adventures, if not in another world, at least in a distant place, and yet tell all as having taken place to-day or yesterday. They therefore made for themselves greater illusions than any I could have palmed off on them. If I had not gradually learned from my natural bent to work up these visions and conceits into artistic forms, such a vainglorious beginning could not have been without injurious consequences to me." Even when the playful lie becomes artistic production there is always a leaning toward genuine deception. Goethe says: "I took good care not to alter the circumstances much, and by the uniformity of my narrative I converted the fable into reality in the minds of my auditors. Yet," he adds—and this is proof that the deceit was playful—"I was averse to falsehood and dissimulation, and would by no means lightly indulge in them."[313] The same remarks apply to the corresponding amusements of adults, such as fishing and hunting stories, and Munchausen tales generally.

In concluding this subject the temptation is strong to go into some of the special forms of fantasy, such as, for instance, the association of sensuous impressions with abstract ideas. Poetry has the task of justifying such combination, and this quatrain affords a simple instance:

"Woher kommt der Blutegel?
Aus der Reisfeld treibt er in den Fluss.
Woher kommt die Liebe?
Aus dem Auge senkt sie sich in's Herz."

"Whence comes the leech, then?
Out of the rice field it turns to the stream.
Whence comes love, then?
From the eye it sinks down to the heart."

From this doggerel to "Warte nur, balde ruhest du auch," suggested by a view of wooded hills standing in evening quiet, is but a matter of development. Metaphor ensues when abstract form is superseded by sensuous impression. The designer and novelist Töpffer gives a beautiful instance of such materializing of the spiritual in this interesting contribution to child psychology when he tells us how he always conceived of conscience in the form of his teacher. "For a long

time I did not distinguish between the inner voice of conscience and the admonitions of my instructor. When I felt the stirrings of the former I pictured the latter before me in his black robes, with his scholarly air, and his spectacles on his nose."[314]

3. *Attention*

As I have attempted to set forth in former efforts,[315] attention is probably in its earliest manifestations rather a means for the furtherance of the struggle for life than a so-called faculty of the mind. The instinct of lying in wait (by which we must understand not merely holding one's self in readiness to seize prey, but also a preparedness for flight) is, as I conceive, the elementary form of attention. Some sense-perception called forth by the prey or the enemy, as the case may be, warns the animal to brace his organism for the utmost swiftness and accuracy of aim in view of what is coming; secondly, to hold his muscles tense and ready for lightning-quick reaction to the approaching stimulus; and, thirdly, to keep such restraint on his whole body as to repress all sounds and movements which might betray him. Among the higher animals, and especially man, "theoretic" attention has developed from this motor attention, which reacts to the anticipated stimulus with special external movements. In the former the reaction is an internal, brain process, not involving the second of the steps given above; it is sufficient to seize and master the object—to lie in wait apperceptively, as it were. The characteristic holding of the powers in check seems to argue the derivation of this sort of attention from the motor, thus grounding both on instinct. Expectancy is not then a variation, but rather a fundamental form of attention, and concentration on an object present before it results from a succession of constantly renewed expectations.

Both forms of attention are of real importance in the world of play, but we will note only those cases in which the effort of attending is itself the subject of playful exercise. Sikorski has asserted forcibly that children frequently make use in their play of the expectation of a familiar impression whose memory picture is already present in the mind; what Lewes calls "preperception," and Sikorski "reproduction préparatoire." He says: "It is very interesting to notice how children use attention in their play. It is one of the most salient features of all the mental operations of children in all their busyness and destructiveness. It may be called a sort of mental auxiliary which gives variety to play."[316] He goes on to instance Preyer's son, who opened and closed the cover of a can seventy-nine times in succession, and evinced the closest attention all the while.[317] The expectation of a resulting sound is no doubt an essential part of such play as this.

Alternate stress and relaxation of attention account for the charm of hide and seek. Darwin says that his son on the one hundred and tenth day was delighted when a handkerchief was put over his face or his playfellow's and then suddenly withdrawn.[318] While surprise was probably the principal cause of this delight at first, on its repetition expectation and the sudden revelation must play a part. When a child throws stones in water or at a mark, batters an old pot, awaits the tossed-up ball or watches a rolling one, we must reckon with the pleasure which is derived from the exercise of close attention, as well as that in movement as such, and in this kind of play the comparison of memory pictures with present reality. "In all such play," says Sikorski, after instancing several examples, "a particular result is expected and awaited as something desirable. The sound of the stone striking the water, the direction taken by the soap bubble the moment it is tossed off,[319] all such consequences are pictured in advance, and the essence of the enjoyment consists in the coincidence of reality with the mental image."[320]

At this point we may again take up the process of recollection which is attended with some difficulty. The progressive power of rhythmical repetition, especially when musical or poetic, to whose chains we are such willing captives, is nothing else than attention fixed on what is to come. Still stronger is the tense expectation aroused by artistic productions which require time for their presentation. In the drama and recitation especially must we ascribe value to continuity, for here true art consists not so much in taking the hearer or reader by surprise—indeed, this is an insignificant element—as in contriving to make him suspect the coming situation and await it with intense concentration. On this depends not only the effectiveness of tragedy (O. Harnack has compared Ibsen's Ghosts in this respect with the antique Œdipus), but in large measure that of all narrative poetry. "The poor satisfaction of a surprise!" exclaims Lessing. "I am far from thinking that the enjoyment we get from the work of a great artist is due to concealment of the denouement. I believe, moreover, that it would not transcend my powers to create a work in which the climax shall be revealed in the first scene, and from that very circumstance derive its strongest interest." Finally, we must notice the interesting phenomena of attention in its connection with gambling, for the tremendous effects of which many diverse causes must conspire. Ribot says of it, "C'est la complexité qui produit l'intensité."[321] The tension of interest in gaming depends on the two possibilities, winning and losing. It must be one thing or the other, and this fact differentiates it from our previous examples. Hope of winning usually looms large in the foreground, the possibility of losing assuming more the character of an auxiliary, adding

intensity to the process. “Gambling,” says Lazarus justly, “has ruined many, enriched few, yet every player expects to be of the minority.”[322] As games of chance will come up for more exhaustive treatment later, I merely mention here that the effort of attention is one ground of their strong effect.

We now take up playful apperception of new impressions. The deep-rooted impulse to bring everything within the sphere of our own powers is especially powerful in the presence of novelty, of what is unfamiliar. We experience an almost irresistible desire to examine closely any strange object and make ourselves acquainted with its properties. Curiosity is the name given to the playful manifestation of attention which results from this tendency. Since I introduced it among the plays in my work on animals I have been told that curiosity is no play; but if we keep to our principle that the exercise of an impulse merely for the sake of the pleasure we derive from it is to be called play, then I am unable to see why curiosity should form an exception. It stands midway between two kinds of perception as applied to what is new, but is identical with neither. On one side is the impulse to inquire into the practical use of the unfamiliar object, whether it is beneficial or injurious; on the other side is thirst for knowledge, not entirely with a view to appropriation, but more concerned with placing the object properly in our system of things known. But curiosity, while it does depend on the stimulus[323] of novelty, concerns itself primarily neither with the practical value of the thing nor with its theoretic significance. It simply enjoys the agreeable emotional effects which arise when a new concept does not readily adjust itself to the beaten track of the habitual, and requires paths at least partially new to be opened before it. The interest attaching to scientific investigation is logical and formal, but that excited by curiosity may be said to be material. The freshness of the untried belongs to this new mental heritage, and is as exhilarating as the mountain climber’s discovery of a new path to some coveted summit. Where such pleasure becomes the ground of activity, that activity is play. For illustrative purposes let us suppose a landslide. Practical interest would at once apply to the proper authorities to find out the extent of damage caused by the catastrophe; scientific and learned curiosity would investigate the causes; while the simply curious would run from all directions just to see what was happening, using their powers of attention playfully.

In The Play of Animals I have presented quite a collection of examples, and I insert another here, which was not at that time available. When Nansen was on his north polar expedition a valuable gun accidentally fell into the sea. As the water at that place was but ten metres deep an attempt was made to recover the

weapon. “While we were so engaged a bearded seal constantly swam around us, regarding us wonderingly, stretching his great head now to this side and now to that side of us, and drawing nearer and nearer as if he were making efforts to discern in what sort of nocturnal labour we were engaged.”[324] When we read such reports and see how widespread these phenomena are in the animal world, we naturally expect to find them universal among men. Yet it has been maintained by some that the lowest orders of savages have extremely little or no curiosity at all. Spencer has published a note in his Data of Sociology to the effect that it is entirely wanting among such peoples: “Where curiosity exists we find it among races of not so low a grade.”[325] I do not think that this can be substantiated. The numerous reports of travellers which seem to give colour to it can, I believe, be explained in two ways: First, the savage is too suspicious to show his curiosity; and, secondly, many reporters in speaking of the lack of curiosity refer rather to scientific curiosity, or thirst for knowledge. The Bakaïri of central Brazil, who are certainly primitive enough, displayed, according to K. von den Steinen, lively curiosity, while they had absolutely no desire for knowledge. “Our clothes,” he says, “were as strange to these good people as their nakedness was to us. I was escorted to the bath by both men and women, and it was amusing to see with what interest my clothes were examined. It never seemed to occur to them that I might resent the inspection. They showed some interest in my Polynesian tattooing, but were evidently disappointed not to find something marvellous concealed under all this careful and unheard-of wrapping.”[326] Just as curiously they investigated the contents of his pockets; admired his watch, which they called “moon,” because it did not sleep at night. A genuine desire for knowledge was nowhere shown, only a playful curiosity. K. von den Steinen has also recognised this distinction. “Nothing could be more mistaken,” he says, “than to suppose that frank curiosity is a genuine desire for knowledge or a longing to understand the cause of things.”[327] He is a firm upholder of the other view, having lived for some time alone among the Bakaïri, and says that much which he had observed as characteristic of them vanished when the larger company arrived; the perfect *naïveté* disappeared, and their manner became more and more that of the savage as usually described to us.[328] That the higher standing races are extremely curious is a familiar fact, admitted and illustrated by Spencer himself. I instance only Semon’s humorous account of the Ambonese. “A committee from the village made visits lasting for hours on the ship where he was busy with his men. All hints that they might be needed on shore were unavailing, and for two days I bore it uncomplainingly when they crowded into my tiny cabin. On the third day I thought it best to speak to them

plainly, and asked them in Malay to sit before the cabin door.... And the rest were just as curious, although they did not come on board ship. My morning dip in the sea was a treat to the whole village. A crowd of spectators gathered to witness the show, observing every detail, and not scrupling to express their criticisms."[329]

In children, curiosity is useful as an antidote to instinctive shyness in the presence of what is new and strange, and as an introduction to the general desire for knowledge. It is stimulated by surprise, but can be called true curiosity only when the perception of what is unusual has a directly pleasurable effect, as, for example, when an infant six months old regards a veiled face with close attention and signs of delight. Tiedemann reports as early as the end of the second month: "He makes more and more unmistakable efforts to add to his store of ideas, for new objects never seen before are followed longer with the eye."[330] "All little children," says Preyer, "make ineffective sympathetic movements of various kinds when they hear new sounds, music or songs. They like to move their arms up and down. The child, on hearing, seeing, or tasting something new, directs his attention toward it, and experiences a pleasant sensation of gratified curiosity which induces motor discharge."[331] Sully regards curiosity as the best offset to fear in children, and considers it a fortunate circumstance that the commonest causes of fear—namely, new and strange phenomena—are also the originators of a feeling such as curiosity, with its attendant impulses to follow and to examine. It would indeed be detrimental to intellectual development if new things roused feelings of fear exclusively. Yet in spite of these differences, fear and curiosity are probably closely related, since the caution and suspicion which characterize fear may be the point of departure for curiosity. Caution impels the animal to examine with careful attention every unusual object which makes its way into his environment, with an eye to its possible injurious or useful character. Assuming that this impulse is emancipated gradually from its double practical aim, we see it converted into curiosity before our eyes, while ontogenetically it is the antecedent of the thirst for knowledge, just as the practical aim precedes it phylogenetically. Perez has described this evolution beautifully. Playful exercise of the sensor and motor apparatus, which is at first mere obscure impulse toward sensation and movement, achieves more and more the clearness of intellectual activity as it becomes associated with curiosity. Yet all this results "not so much from the necessity for knowing what things are and what they can do, as from the demand for new and fresh impressions."[332] Veritable thirst for knowledge, with its unappeasable questioning, gradually develops from this, making without difficulty the

transition from the realm of play to that of genuine scientific investigation.

This demand for novelty plays a conspicuous rôle in the life of an adult as well. The masculine half of the race exhibits a praiseworthy self-denial in ascribing this quality to the other sex exclusively, but the women are about right when they say that men are quite as curious as themselves. Without going into the merits of this controversy, we will confine our discussion to the province of curiosity in æsthetic enjoyment. It is no doubt true that the highest and most complete æsthetic pleasure is independent of the stimulus of novelty, as is proved by the fact that our appreciation of a work of art is undiminished by repeated examination, and it remains "herrlich wie am ersten Tag." Yet there is a peculiar charm attaching to a first view of even the most perfect work of genius, which E. von Hartmann has likened to that of the first kiss, and which must be at least in part due to novelty. This advantage depends not entirely on the diminishing of the satisfaction by use, but also on a positive, independent pleasure in the apperception of a new thing, and new, original, in the sense of being a revelation, are the productions of genius. In the development of art, too, a disinclination to get into ruts, together with positive enjoyment of original work, is a decidedly progressive force, as opposed to the multiplication of reproductions and imitations. Before the revolution caused by a new thing has become an accomplished fact, behold! it is no longer new, and the danger is of achieving only the pre-classical, as it were, and not the classical. Of following the prophets, perhaps, but not the Messiah.

4. *Reason*

We need no chain of reasoning to prove that the logical faculty is involved in very many plays, even those of simple movement; but now, as heretofore, we will strictly exclude all uses of it except those in which it is the very object of the play, those in which it is playfully experimented with. Two bearings of the subject will engage our attention: first, causality; and, second, inherence. Both are prominent in the playful use of reason, while some special forms involve the use of judgment as well, as in the play of wit, for instance.

How far the gratification afforded by play is dependent on causality is strikingly shown by the fact that there is not a single form of it which does not exhibit in one shape or another the joy of being a cause as the germ of its attractiveness. It is true that this universal fact directs the attention more to the feeling of being a cause than to the logical idea of causal connection, yet we find enjoyment of logical activity prominent in the categories which we have designated as

"hustling things about," and as destructive and constructive movement play. The tendency toward such play was chosen for our point of departure, and the indications are that it is of the first importance to the child, and that only through frequent repetitions of the *post hoc* does independent interest in the *propter hoc* gradually arise. Still, it can not be denied that the true characteristics of play are in inverse ratio to the intensity of the desire for knowledge, and it should be clearly stated that we are now on the frontier territory of play and earnest. The steps by which we have reached this point can be clearly traced by every reader of what goes before; therefore, without stopping to recapitulate, I cite this striking remark of Preyer's as a fitting climax. He says in reference to the evolution of a feeling of individuality: "Another important factor is the perception of change brought about by his own activity, in the familiar objects by which he is surrounded, and, psychologically speaking, or, indeed, from any standpoint, a red-letter day in the infant's life is the one on which he first grasps the connection between his own movements and the sense-perceptions caused by them. The sound produced by tearing and crumpling paper was still unrecognised by this child till in his fifth month he discovered that it gave him a new sensation, and he repeated the experiment day after day most energetically until the stimulus of novelty wore away. Still, there was no clear apprehension of causality, but the child had now had the experience of being an originator, and of combined sight and sound perceptions, regular in so far that when he tore paper it became smaller for one thing, and sound resulted for another. Other such amusements were shaking keys on a ring, opening and shutting a box or purse (thirteen months), repeatedly filling and emptying a table drawer, piling up and scattering sand and gravel, rustling the pages of a book (thirteenth to nineteenth month), digging in sand, pulling footstools back and forth, laying stones, shells, and buttons in rows (twenty-one months), pouring water in and out of bottles, cups, and cans (thirty-first to thirty-third month) and throwing stones in water."[333] Miss Shinn also gives a pretty example in the case of her little niece: "In the twentieth month (five hundred and ninetieth day) I saw her outdoors, especially when driving, cover her eyes several times with her hands. I thought the sunlight might be too brilliant, but it is more likely that she was experimenting, for in the following weeks she would often cover her eyes with her hands, and take them away, hide her face in a cushion or on her own arms, often saying 'Dark,' then look up, 'Light now.'"[334] Tormenting animals is another direction in which the quest for a causal connection is evident. When André Theuriet was a four-year-old boy he threw a newborn puppy in the water just "pour voir," and then wept bitterly because he could not rescue it.[335] As

these demands of reason become prominent we can clearly see that we are approaching the limits of play.

There are other cases, however, where the search for a causal connection can more assuredly be called playful. An essential feature of the enjoyment derived from mental contests is the calculation of the result. Several possibilities are before the player, and he enjoys the intellectual effort of testing each and using the most advantageous. In the solution of whist and chess problems and such like, rivalry becomes an insignificant feature, and logical experimentation forms the central interest. Just so with the common and often ancient mechanical and mathematical puzzles. Pleasure in conquering their logical difficulties is derived from the gratification of a "general impulse or general instinct to exercise the intelligence as such."[336] Causality plays a prominent part in poetry, too, since we require it to reveal to us the inner relations of the events set forth and to exhibit cause and effect in clearer and more orderly sequence than the complexities of reality admit of.[337] Especially is this the case with tragedy. In my Einleitung in die Aesthetik I expressed the opinion that the treatment of tragical climaxes as logical necessities is an important means of bracing us for the increasingly painful inner imitation which is so essential, without weakening or modifying its effect. "When the course of the tragic tale is so far developed as to suggest that a catastrophe is imminent, it should also appear inevitable. Stern necessity must urge the hero toward the fearful goal so persistently that escape shall be unthinkable, a logical impossibility. This feeling of necessity is calculated to fix the æsthetic illusion, and consequently help on the effect by rendering more strenuous the mental tension and directing it so forcibly toward the climax that consciousness is a captive to inner imitation until the tragedy has culminated. In other words, fear of the catastrophe is so absorbing as to create the illusion that the apprehended event is just at hand, and consequently all sense of the painfulness of the situation is merged in the stress of this illusion, since it alone is competent to relieve the tension."[338] I might have continued to the effect that such manifestations of the law of cause afford us a positive logical satisfaction, and in spite of the impression forced upon us by the crushing blows of Fate, weave some threads into the intricate texture of æsthetic enjoyment, because in them we recognise a proof of the existence of a universal causal nexus.

A glance over the sphere of inherence, too, will help us to a proper orientation for this inquiry. By the word inherence we signify the relation of a thing to its qualities, or, abstractly speaking, the relation of a concept to its characteristics. A common and well-nigh universal form of play depends on this principle—

namely, the making and solving of riddles. The large majority of them involve an effort to find the concept whose characteristics are given, and the task is intentionally rendered difficult, with the result that the solution is attended with a proud sense of success. The exercise easily leads to a contest, but it is grounded in experimentation with the logical faculty, and many persons enjoy the amusement for this reason alone.[339]

Children as young as four years sometimes indulge in a sort of preliminary exercise in riddle solving, such as the simple game in which one child, noticing the peculiar colour of some object in the room, says, “I see something you don’t see, and it’s yellow,” and his comrade must guess it. The play here is connected with sense perception by the relations of things to their qualities, and there are many games for large companies much like it. In a genuine riddle the enumeration of characteristics must be imperfect or in some way misleading to render the solution troublesome, and still sufficiently complete to make it possible; many are made sufficiently puzzling by the lack of logical ὁριδκός without the introduction of other means of mystification; such, for example, as—

“Drufg’schloh,
Ufg’ deckt,
Usse g’nô,
Dra gschmöckt,
Und dann wiederum versteckt.”
(Tabakdose.)

“Inside whole,
Outside full of many holes.”
(Thimble.)

“Two legs sits on three legs
And milks four legs.”
(Milkmaid.)

“Oben spitz und unten breit
Durch und durch voll Süssigkeit.”
(Zuckerhut.)

“First white as snow,
Then green as clover,
Then red as blood,
They taste to all children good.”
(Cherries.)

The play is more genuine, however, when the characteristics are more veiled, as in (1) metaphor and (2) apparent contradiction. The riddles which follow are evidently calculated to put one on the wrong scent. On the coast of Malabar two familiar riddles are “Little man, strong voice,” and “A little pig in the woods.” The answer to the former is Grasshopper, and to the latter Pediculus cervicalis.

“There is a little man
With a stomach of stone;
He has a red cloak
And a black cap on.”
(Haw.)

“S’itzt etwas amme Rainle,
Es wackelt ihm sein Beinle;
Vor Angst und Noth
Wird ihm sein Köpfle feuerroth.”
(Erdbeere.)

“An iron steed with silken reins,
The faster runs the horse the shorter grow the reins.”
(Needle and thread.)

Apparent contradiction is a favourite means of mystification, as in the questions “What teaches without speaking?” A book. “What two things are together early and late, and yet never touch each other?” Parallel lines. The East African

Schamlala have a riddle which is metaphorical. “My grandfather’s cattle low when they are driven away, and are quiet coming home.” This refers to the water gourds carried by the women, which clatter when taken away empty, and are silent as they come back filled.[340] A German riddle of this kind is:

> “Ich hab’ einen Rücken und kann nicht liegen;
> Ich hab zwei Flügel und kann nicht fliegen;
> Ich hab ein Bein und kann nicht stehen;
> Ich kann wohl laufen, aber nicht gehen.”
> (Nase.)

I can not here examine other forms of logical experimentation with the exception of the phenomena of wit, which are too important to be omitted from our review. Primarily wit should be classed with the comic, of which we shall speak in another connection, but at times it overreaches these limits, and more general grounds must be assigned for it in logical experimentation. When wit is free from sarcasm and assumes the form of playful judgment, as Kuno Fischer says, then its most natural expression is in the riddle and the proverb. The evolution of such serious wit as Jean Paul’s is possible only to a highly cultured people, and Nietzsche, the most brilliant German exponent of modern witticism, displays a certain tendency to proverb. “To be stiff to his inferiors is wisdom for the hedgehog” has the true flavour of the terse sayings found among all primitive people. The satisfaction afforded by true wit is due to the playful conquest of logical difficulties; some statement is made which confuses by its unusual conjunction of ideas, and we hail as a victory the sudden emergence of the hidden meaning. Therefore it would be a mistake to call the pleasure produced by wit exclusively a play with reason, since constructive imagination and the formulation of the abstract are also involved. When the negro produces this —“God keeps the flies off the ox that has no tail”—he gives us an expression of wit illustrating abstract judgment which may be accompanied by the stronger emotion.

B. EXPERIMENTATION WITH THE FEELINGS

That a man may play with his emotions is a well-known fact, but one which has not to my knowledge been adequately investigated in all its ramifications. While the “luxury of grief” is often referred to, the interesting distinction of its varying degrees has not been gone into. It can not be labelled, I think, simple play with pleasurable sensations, partly because the concentration of attention on the feeling itself instead of on the accompanying sensations and ideas tends to weaken the very feeling in question, and also because the division of

consciousness which attends such a survey of one's own emotional life is less operative in the sphere of pleasure.[341] There must be a distinct recognition that it is genuine pain which we are enjoying before the sense of being a spectator arises, and we can become conscious that we are playing with our emotions. The various feelings which may be involved in this process are physical pain, mental suffering, surprise, and fear. Besides these four, the mixed feeling of suspension between pain and pleasure might be mentioned, but as it has already been referred to it will be included in our treatment of surprise.

1. *Physical Pain*

I have frequently had occasion to note that we commonly enjoy stimuli whose effect is distinctly disagreeable because they are calculated to satisfy our craving for intense impressions. A sensitive tooth is constantly visited by the tongue, a stiff neck is constantly experimented with, any slight wound is repeatedly pressed and rubbed, etc. Hall[342] and Allin testify that this is especially the case in childhood. We have already noticed the shock of a cold bath and the sting of sharp drinks. The pleasure which we derive from eating pungent horseradish, which brings tears to the eyes, is a relative, distant and humble it is true, but still unmistakably a relative of our enjoyment of tragedy. Our satisfaction in strong, self-produced excitement is so intense as to make physical pain to a great extent enjoyable. It is true that while these phenomena are so far quite normal, secret but direct paths connect them with the realm of pathology. While some individuals display this in a somewhat anomalous desire for taste stimuli, in others pleasure in petty self-torture develops into a sort of sport, having as its object not merely a test of their power of endurance (of that we shall speak in the section on will) but some obscure delight in actual suffering as well. Cardanus confesses in his autobiography to a diseased condition which could not dispense with pain, so that if he found himself perfectly comfortable he was at once moved by an irresistible impulse to torture his body until tears came. Mantegazza tells of a veteran who took a strange delight in scratching the inflamed edges of an old wound in his leg.[343] In some forms of insanity the patient maltreats his person, inflicting the most frightful wounds and mutilations, which would be incredible if his sensibilities were not to a great degree blunted. In the attempt to explain these phenomena some have thought them an exception to the rule that pleasure accompanies only what is in some way useful, but it seems to me that a sufficient explanation of normal cases is found in the utility of the experimental impulse, which in seeking strong stimuli takes a certain amount of pain with the rest. So long as pleasure predominates over pain in the

experience, play is possible. In pathological cases sexual excitement is often aroused sufficiently to neutralize the suffering, and where this is not the case we must suppose a perverse directing of the fighting instinct against one's own body, furthered by the deadening of sensibility to pain.

2. *Mental Suffering*

Psychologists have given special attention to the enjoyment which is derived from contemplating unpleasant images and subjects. Perhaps the most familiar passage on the subject is that of Spencer's on the luxury of grief, yet, as he himself admits, his idea of self-pity does not clear it up, and he goes on: "It seems possible that the sentiment which makes a sufferer wish to be alone with his grief, and makes him resist all distraction from it, may arise from dwelling on the contrast between his own worth as he conceives it, and the treatment he has received—either from his fellow-beings or from a power which he is prone to think of anthropomorphically. If he feels that he has deserved much while he has received little, and still more if instead of good there has come evil, the consciousness of this evil is qualified by the consciousness of worth, made pleasurably dominant by the contrast.... That this explanation is the true one, I feel by no means clear. I throw it out simply as a suggestion, confessing that this is a peculiar emotion which neither analysis nor synthesis enables me to understand."[344] This is indeed an unsatisfactory explanation, and the play idea seems to bring us nearer to one, for here, as in the case of physical pain, it is the deep-rooted need of our nature for intense stimuli which enables us to enjoy our own suffering. That unassuageable longing of Faust which had exhausted the meagre emotional recourses of study, and now dragged him out in search of life and experience, was a longing for both pleasure and pain, since both could stir up life's deep sea, which now lay stagnant:

> "Sturzen wer uns in das Rauschen der Zeit,
> Ins Rollen der Begebenheit!
> Da mag denn Schmerz und Genuss,
> Gelingen und Verdruss
> Mit einander wechseln, wie es kann
> Nur raselos bethätigt sich der Mann."

Contemplative natures, not given to activity, have a tendency to play with their suffering, and by a strange division of consciousness stand as on some rocky height, beholding with pleased appreciation the foaming torrent of their own feelings. In the closing chapter of my Play of Animals I treated the subject of divided consciousness at some length, and will not here repeat what is said there. For a specific instance we need only point to the artist who brings a tragic tale to

a close with real regret, and, in spite of the suffering it has caused him, is filled with the joy in being a cause, in his power to create. When Kleist finished Penthesilia in Dresden he went to his friend Pfuel in tears. “She is dead!” he wailed, and yet, in spite of his deep and genuine grief over the death of his heroine, in the depths of his soul he was conscious of joy in his creation. This is a good example of play with mental suffering, and Marie Bashkirtseff furnishes another illustration which I have cited in my earlier work. “Can one believe it?” she writes in her journal, at the age of thirteen; “I find everything good and beautiful, even tears and pain. I love to weep, I love to despair, I love to be sad. I love life in spite of all; I wish to live. I must be happy, and am happy to be miserable. My body weeps and moans, but something in me that is above me enjoys it all.” By these words she reveals most clearly that division of consciousness in which, behind the suffering I, another seems to stand, which has the power to change the grief to bliss. Goethe, too, seems often to have felt the same. His Werther blames himself because he is prone to cower before petty ills. Further than this there is such a thing as emotional pessimism founded on temperament. For Schopenhauer it was an evident satisfaction to work himself up to a condition of the utmost indignation over the evils of the world. Kuno Fischer has sharply exposed this playful characteristic of his pessimism. It is true, he says, that Schopenhauer takes a serious and even tragic view of the world, but, after all, it is only a view, a spectacle, a picture. “The world tragedy is played in a theatre; he sits in the audience on a comfortable divan commanding the stage, using his opera glass with discretion. Many of the spectators forget the suffering world at the buffet, none follow the tragedy with such close attention, such deep earnestness, such a comprehensive glance as his. Then, deeply moved and soul-satisfied, he goes home and writes down what he has seen.”[345] Melancholy, too, in the ordinary sense, not the pathological, belongs here, the melancholy of lovers, poets, and artists, the condition typified by the phrase “dégustation complaisante de la tristesse.”[346]

Finally, pleasure in the tragic, of which we have spoken in another connection, should be mentioned here. Augustine, the great prober into the problems of the soul, has set forth this question with inimitable clearness in the third book of his Confessions. “Why,” says he, “should a man sadden himself by voluntarily witnessing what is painful? The spectator does undeniably feel sad, and the very sadness is a pleasure. How can we explain this sympathy with unreal, theatrical sorrows? The hope of ultimate rescue is not the only thing that appeals to him—it is the actual accumulation of misery as well, and he praises the play in proportion as it moves him. When common woes are so represented as not to

affect the hearer, he goes away dissatisfied and complaining. If he is affected, on the contrary, he listens attentively, and weeps with delight." If I understand Augustine aright, he finds the solution of the puzzle in the idea of a sort of sympathy which he distinguishes from real or moral sympathy, and which is at bottom nothing else than the play of inner imitation, that æsthetic feeling of fellowship of which we shall hear more later. He puts his finger on the real reason why fellow-feeling for the sufferer has a special charm when he admits that tragic representation affected him with sharp, creepy sensations, like the scratching of a finger nail. Thus he concludes, as we have done, that the foundation of enjoyment of tragedy is the result of intensive stimuli. As Du Bos[347] remarks, we take the pain accompanying the emotion in the bargain because we like the emotion, the agitation of feeling, so well. This recalls the Aristotelian dogma of the catharsis, but the objection to this theory lies, as its name implies, in the fact that it seeks a practical end for the play of æsthetic pleasure. For Aristotle the question is to establish the purifying effects of a thunderstorm, not the enjoyment of its grandeur, and for this reason the doctrine of the catharsis, however clear it may be, does not directly answer our question. Delight in the tragic element is not concerned with the lull after the storm, but only with the surging might of the tempest itself, in which we are playfully involved. Weil and Bernays seem to me to have the right idea when they speak of the need for violent emotional play, and of enjoyment of ecstatic conditions. And Lessing also, when he says that strong passion gives more reality to feeling. But it is doubtful whether Aristotle considered this side of the question in forming his theory.

3. *Surprise*

Surprise is connected with fear, and for this reason is in itself a disagreeable sensation; yet, on account of its strong psychophysical effect—namely, the shock which it produces—it becomes highly enjoyable in play, and displays, perhaps more clearly than any of the other cases, the charm of strong stimuli. Children indulge very early in play involving the shock of surprise, and its effectiveness as a means of giving pleasure becomes more and more intense. Darwin relates that his son, from the one hundred and tenth day, was wildly delighted when a handkerchief was laid over his face and then suddenly withdrawn, or when his father's face was hidden and revealed in this way. "He then uttered a little noise, which was an incipient laugh." I referred to this in speaking of expectancy, which, indeed, goes hand in hand with surprise, however opposed they may appear, since surprise which is entirely unexpected is of course no part of play.

There is always playful experimentation with the shock when we expect it, but do not know when or in what form it will appear. It is just this combination which makes the emotional effect of surprise greater than it would otherwise be. When, for example, we hold a lighted match over a lamp, we are the more startled by the slight explosion because we have attentively awaited it; and there are many games for children in which the combined effect of expectation and surprise furnish an essential part of the pleasure, such as those where persons or objects are hidden. The excitement, too, which is caused by loud and sudden sounds is of the same character. M. Reischle, in his fine paper on child's play, distinguishes a special group of expectation and surprise games, and points out that the little ones peek while their comrades are hiding, and yet are overjoyed to find them, and apparently surprised. In many throwing and catching games both elements are influential in heightening the stimulus, and special plays grow out of them, such as "Hide-and-Seek," "Blind-Man's Buff," "Drop the Handkerchief," as well as many games of chance. Indeed, in the last named the stimulus of surprise is often of special importance,[348] and one of the chief sources of pleasure is the tension of expectancy followed by the sudden decision on the fall of dice.

Yet more interesting is the significance of surprise in relation to the comic. While the latter is more than a play with surprise, this feature becomes a factor that should by no means be overlooked in studying comic effects, especially when we reflect that previous efforts to explain this modification of aesthetic enjoyment have proved abortive, possibly through failure to give due weight to this very element. E. Hecker advances the theory, it is true, that laughter from tickling accounts for the origin of enjoyment of the comic, but in this purely physiological explanation he seems to overlook the fact that as a rule we laugh only when we are tickled, not when we tickle ourselves—that is to say, that contact with finger tips becomes tickling only when the hand is a strange one. Even in physical tickling, then, there must be some psychic factors, of which surprise may be one, even though it is inadequate alone to explain the phenomena. The fact that surprise not carried far enough to frighten is one of the first causes of laughter in children gives colour to this idea. Zeising has shown conclusively that there is a double surprise in the comic, the first being the intuitive start at something unusual, and contrasted with what is normal and typic, be it occasioned by some anomaly in the object itself or depending only on the momentary *milieu*—such, for instance, as the ridiculous appearance of a tiny cottage in a row of palatial residences.[349] This first shock is followed by a moment of suspense. "When the entirely unexpected happens," says Goethe in

Tasso, “the mind stands still for a moment,” which again is interrupted by the new surprise of finding the first one negatived or reversed.[350] Here we have the counter shock, whose pleasurable effect is strong enough to more than neutralize the first, and render their combined result agreeable.[351] As Kant, with his unrivalled penetration, has remarked, we play with the error as with a ball, tossing it back and forth and looking after it each time; in this way we are hurried through a succession of tensions and relaxations.

While this illustration shows clearly how the essence of comicality is due to the peculiar character of the double shock, yet it remains true that even in this case surprise as such is pleasurable, and plays its part in the complicated effect.

4. *Fear*

That even fear, the most abject of all affections, may become the object of playful experimentation is one of the riddles of soul life. Here, too, we can only apply the theory of pleasure in intense stimulus to that of divided consciousness. When Lukrez dwells upon the pleasure of gazing on a stormy sea from the vantage ground of a rocky crag he illustrates this state, only here the soul is both in the midst of the storm and on the rocks as well. Apart from and above the terror-stricken personality stands another, safe and free, and enjoying the fascination of painful excitement. For the power of fear is fascinating, even benumbing in its effect. Souriau says: “I remember, as a child, seeing a snake, cut in two by a spade, convulsively writhing on the garden walk. The sight filled me with terror, which rooted me to the spot. Fascinated, I stood perfectly still, my eyes following the agonized twisting of the creature while I felt waves of pain surging through my own body.”[352] Of course, such a condition can be playful only in case of an æsthetic illusion when the fear is but apparent, and may be dispelled at will, and when pleasure is stronger than pain in the experience. Nevertheless, there are transitions between real and apparent fear which are particularly operative when curiosity becomes the counter irritant. Every one’s childhood will furnish an example of this. George Sand tells us how she as a little girl tried with a playmate to get a glimpse into the spirit world by means of mystic oaths and incantations. The children waited long in fear and trembling, for blue flames, protruding devil’s horns, etc. This was only a play, “but a play that set our hearts beating.”[353] Although fear in this instance has more the character of a necessary accompaniment than of an object of play, real delight in the gruesome is undeniably evident in the world of art. In the first place, there are legends and stories with horrible fantasies. The child is wrapped in breathless interest in accounts of ghosts, wicked magicians, werewolves, etc.,

and while safe in his own home enjoys the terrors which these ideas excite. As a small boy I listened with nameless horror to the crude account of the fate of Faust secretly read to me by our gardener out of a popular book. I remember how, when the devil led Faust through the ceiling, his skull was broken and his brains spattered on the wall. For some time after that I was afraid to pass shady places in the garden, even in the daytime. With older boys descriptions of battles and adventures, and, above all, Indian stories, take the place of fairy tales. The Leather Stocking Tales were my chief delight, especially The Pathfinder, and I can still recall the rapt attention with which I followed the frightful perils which threatened my hero, whenever I could get a quarter of an hour off. How meagre is our capacity for æsthetic enjoyment in later years compared with the absolute, unconditional surrender to it of a youthful soul! Adults enjoy the gruesome in poetic creations such as those of Hoffman and Victor Hugo. When we read of the struggle with the polypus in Toilers of the Sea the strong stimulus imparted by fear is certainly the chief source of pleasure. My grandfather in extreme old age liked nothing better than to read such thrilling tales of hairbreadth escapes, and the strong preference for detective stories evinced by the masses is based on the same grounds. Savages, too, like children, always prefer tales which deal with demons and magic.

Finally, we must notice an æsthetic phase which is related to fear—namely, exaltation. Since Kant's thoroughgoing elucidation the principle is fixed that exaltation is the result of a rebound from fear. First depression, then exaltation. At first, the object of our reverence oppresses us, and for a moment we are painfully conscious of our impotence and nothingness; then comes a reaction; we throw off the oppression and begin to study the revered object with serious pleasure. In my Einleitung in die Aesthetik I did not attribute the first part of this process to æsthetic pleasure, because I found that inner imitation on which I based my investigation only in the second stage.[354] While I still regard it as the highest and most important element in æsthetics, yet I am aware that my view as there presented was somewhat one-sided, as is almost unavoidably the case if one attempts to carry out a theory systematically. As I shall return to this point, let it suffice to say here that probably the depression itself is pleasurable, and so forms a part of the æsthetic satisfaction. It is characteristic of our complex natures that along with our demand to control our surroundings we also feel the need of the domination of a higher power. When we encounter an incontestably overpowering force we gladly surrender unconditionally, and take pleasure in acknowledging that we are insignificant and helpless. The significance of this spirit for religion is apparent. Schiller has designated awe as the noblest human

trait, and Schleiermacher found the springs of religion in the feeling of dependence. The first stage in the satisfaction derived from exaltation is akin to this when we enjoy our self-abasement in order to render more conspicuous the subsequent expansion of an individuality, in the second stage when by the exercise of inner imitation we identify ourselves with the revered object, thus partaking of the greatness which at first overawed us. While it is true that only the second part of this process attains the summit of enjoyment, the first, too, is playful. “How felt I myself so small—so great?” asks Faust, and attributes both sentiments to the selfsame moment. This play with depression is facilitated by repeating the whole process frequently. The mind is not only attracted to the object, but alternately repelled from it, and in this process of repetition depression assumes more and more the character of play.

C. EXPERIMENTATION WITH THE WILL

Since our inquiry in this closing section is not as to the general use of the will in play, but rather into playful experimentation with the will itself, we must direct our attention to the control of movement. Play requires that those movements which depend on both inherited and acquired brain paths shall be under voluntary control. The pleasure accompanying this control is founded on the feeling of freedom and of mastery over self; and it is to be specially noted that almost all the related phenomena take the form of contests and appeal to the fighting instincts. The majority of cases require the suppression of emotional expression or of such reflexes as are connected with them. Thus, for example, winking is not an expression of emotion in the ordinary sense, and yet when it follows closely on the sudden presentation of some object before the eyes it seems to indicate that the person is startled or even terrified. Children often play with this refractory reflex, one moving his hand rapidly before the eyes of another, who makes desperate efforts to keep them open, and a forfeit game is played as follows: Two persons sit or stand opposite one another; one moves his hand close to the other’s eyes while the following colloquy takes place: “Are you going in the woods?” “Yes.” “Going to take some bread with you?” “Yes.” “And you want some salt on it?” “Yes.” “Are you afraid of the wolf?” If he holds his eyes open all the time he is not afraid, but if he winks he must pay a forfeit.[355] The attempt is often made, too, to resist the impulse to laugh while two persons gaze into each other’s eyes. Indeed, such games are too numerous to mention. The effort to repress the expression of pain is still more interesting. Self-control during the suffering of physical pain is everywhere regarded as a proof of manliness, and is earnestly cultivated by savages as by our own boys. The quiet

submission to painful tattooing, the endurance displayed by Indian children often in gruesome ways, the effort of our schoolboys to bear corporal punishment unflinchingly, the self-control of students who joke while their wounds are being sewed, and—to carry the struggle against self-betrayal into the field of mental suffering as well—the apparent indifference of gamblers to the reverses of fortune; while all of these can by no means be called playful, still the cases are sufficiently numerous in which there is actual playful experimentation with the powers of endurance. For example, Rochholz describes this test: Two persons strike the knuckles of the doubled-up fists together, and measure their will power by the length of time that they can endure the pain. Another is to strike the first and middle fingers against those of the other person. A friend of mine told me that as a boy (probably after reading some Indian tales) he once wagered with a comrade as to how long they could hold lighted matches in their fingers. He won the bet, but had to go with a bandaged hand for a long time.

A playful exercise of the will which suppresses not only every admission of suffering, but the fighting instinct as well, is related by Goethe of his youth. After remarking that “very many sports of youth depend on a rivalry in such endurance, as, for example, when they strike with two fingers or the whole hand until the limbs are numb,” he goes on: “As I made a sort of boast of this endurance, the others were piqued, and as rude barbarity knows no limits, they managed to push me beyond my bounds. Let one instance serve to illustrate. It happened one morning that the teacher did not appear at the hour of recitation. As long as all the children were together we entertained ourselves very well, but when my friends left after waiting the usual time, the others took it into their heads to torment and shame me and to drive me away. Leaving the room for a moment, they came back with switches from a broom. I saw what they meant to do, and, supposing the end of the hour to be near, I at once resolved to resist them until the clock struck. They lashed my legs unmercifully, and in a way that was actually cruel. I did not stir, but soon found that I had miscalculated the time, and that pain greatly lengthened the minutes. My rage swelled the more I endured, and at the first stroke of the clock I grasped my most unsuspecting assailant by the hair, hurled him to the floor in an instant, pressing my knee upon his back. The second, who was younger and weaker, and who attacked me in the rear, I held with his head under my arm. The last, and not the weakest, remained, and only my left hand was free, but I caught hold of his clothes, and by a dexterous twist on my part and an awkward slip on his, I brought him down too, striking his face on the floor.”

Another impulse whose suppression is sometimes an end in play is imitation.

Perhaps the most familiar game illustrating it is “All Birds Fly,” in which one of the children says “Pigeons fly, ducks fly, bears fly,” etc., and raises her hands in the air each time, while the others must follow her example only when a bird is mentioned. The Mufti-comme-ça described by Wagner is similar. All stand in a circle except the one who is in the centre making various motions. When he calls out “Mufti,” all stand still; but when he continues “comme ça,” they imitate him. In the English “Simon says,” the players make all the gestures that he commands, regardless of those which he may be making.[356]

All these examples are concerned with the repression of inborn reflexes, expressive movements, and instincts, but acquired habits are no less difficult to withstand. Many games are founded on the assumption that the ability to do so is a proof of will power, and emphasizes the freedom and self-control of the subject. It is particularly well illustrated in vocal exercises. To omit a particular syllable in a familiar rhythmic verse, or possibly several verses, requires a sudden check to the accustomed movements. A well-known German example is the song—

“Europa hat Ruhe,
Europa hat Ruh’,
Und wenn Europa Ruhe hat,
So hat Europa Ruh’”—

in which the first, second, or third syllable of the word Europa, or even the word or all the other words, are omitted. Kreis mentions a similar play for children. It consists simply in substituting other meanings for the words (stretching for bending, for example), so that when the order is given “Bend,” the arm is stretched out, etc.[357] There is such a thing, too, as playful resistance of old habits. How many smokers resolve as a sort of jest to do without cigars for a week! It is the merest playful experimentation; they want to see if they are really absolute slaves of the pleasant vice, or whether the habit is still under the control of their will. If the experiment succeeds, they contentedly go back to their cigars; it is not at all a serious effort to reform. Many frivolous persons play thus with their habits, and take a childish delight in the little conquests achieved by their will, yet without permanently or seriously altering their manner of living.

PART II

THE PLAYFUL EXERCISE OF IMPULSES OF THE SECOND OR SOCIONOMIC[358] ORDER

I. Fighting Play

Our conception of experimentation includes a large number of phenomena having the common tendency to bring into action the manifold inborn predispositions of the organism, but without reference to those instincts by means of which the relation of the individual to other living creatures is regulated. In experimentation only the more general needs, such as are indubitably grounded in the nature of the organism, are allowed expression, in such a manner as to bring into action the sensor and motor apparatus as well as the higher mental faculties. The individual would exhibit similar qualities in isolation; he plays with himself, not with his relations to others, and even when association exists, as, for instance, in ball-catching, he recognises at the same time that experimental play is involved. Now, however, we enter on the consideration of such play as is intentionally directed toward other beings, and first on our list is the inborn impulse to fight. Walther von der Vogelweide has shown the power of this instinct in the impressive lines:

"Des Stromes Wellen rauschten kühl;
Ich sah darin der Fische Spiel.
Ich sah, was ringsum in der Welt:
Den Wald, das Laub, Rohr, Gras und Feld,
Und was da alles kriecht und fliegt
Und seine Bein' zur Erde biegt.
Dis sah ich, und ich sag' Euch das
Keins lebt von ihnen ohne Hass."

"The stream's waves murmured oolly;
I saw the fishes playing there;
I saw all that was in the whole round world;
In wood, and bower, and marsh and mead, and field,
All things which creep and fly,
And put a foot to earth.
All these I saw, and say to you,
That nothing lives among them without hate."

In our common speech, too, life is referred to as a battle, and is in reality too often a general struggle for money or power. It is but natural, then, to find the fighting impulse developed early in childhood and practised in play. Indeed, the demand for its exercise is so strong that there is scarcely any form of play which may not take on the character of a contest. Especially is this the case when there is any difficulty to overcome or danger to be encountered. “Both danger and difficulty,” says Lazarus, “appear as incarnated opponents over whom it is possible to gain a victory.”[359] In the same way play with lifeless objects is easily converted into a contest by the force of æsthetic illusion. As numerous examples of such intensive stimulation of the fighting impulse have already been given, I shall here mention only the mountain climber’s struggle with lofty peaks. In this chapter such collateral themes must be avoided, as we shall find our immediate problem very wide. In order to discriminate as to the relative importance of the various fighting plays the following division of the subject will prove convenient: First, there are direct fighting plays in which the contestants immediately measure their strength, whether mental or physical. The second group is composed of indirect fighting plays where the victory is sought through means of conducting the contest. Among the mental phases of this we find betting and gambling. In the third group we place merely offensive sports in which no defence is possible or availing, such as playful destructiveness, teasing, and the enjoyment of the comic (so far as it is connected with fighting at all). After disposing of all these, two subdivisions yet remain: first, playful chasing, fleeing, and hiding (hunting plays); and, second, the enjoyment of witnessing a contest.

1. *Direct Physical Fighting Play*

Any one who takes the hand of a two-year-old child and strikes himself with it, pretending to be much hurt, can not doubt after seeing the delight displayed by the little creature, the pleasurable effect of the discharge of this impulse so deeply seated in human nature. Yet the fighting instinct seems to be comparatively late in assuming the form of regular independent playful contests. Unprovoked tussling merely for the fun of the thing seldom appears earlier than the third year, while young bears, dogs, and other animals begin such play almost at once. In this youthful tussling the chief aim is to throw one’s opponent to the ground and to hold him in this helpless position. So far as my observation goes in this little-investigated sphere, very small boys seldom stand for their combats. Usually one already seated seizes his comrade, who may be standing near, by the foot, pulls him down, and they fight, rolling over on the floor, and

each seeking to keep the upper hand. The effort is constantly made to keep the enemy's head down, a position so distasteful to the party concerned that the scene threatens to end in noisy and serious strife. As the children grow older they gradually formulate rules for their contests partly through imitation of their elders and partly as the result of their own experience. As with adults, the proper grip of the opponent's body is an important point. "He caught him by the waist, where he was weakest" is quoted as far back as the Hildebrandslied. For throwing, it is often necessary to slip the hand through the other's arms and give him a sudden twist, or to place one arm on his neck and push him backward. The legs, too, have their part to do. Sometimes a boy is thrown across a projected knee, or a leg is thrust outward to check the fall when the attempt is made to throw sideways by lifting. Or the method adopted by Odysseus in an extremity may be employed—a sudden blow dealt at the bend of his opponent's knee being the cause of his overthrow. Usually the fight ends at this point,[360] but sometimes the tussling is continued on the ground, as described above, and the playful character is very apt to be lost. Sometimes it happens, on the contrary, that the fight is over before either contestant is thrown. I saw two boys wrestling, when one of them was lucky enough to get a good grip on his opponent's body, but the latter could bend his head back, whereupon they desisted and called it a tie. There is often an effort to take the enemy unawares, as when a boy leaps unexpectedly on his opponent's back, gives him a violent push, or runs against him forcibly. Suddenly dousing one another with water is another favourite if not very pleasant youthful sport.

Prize fighting by adults seems to have been generally practised in Europe as well as in other parts of the world from remote antiquity. The ancient Egyptians were zealous wrestlers. Among the Greeks, where the art was extraordinarily developed, it often became brutal; breaking the fingers and throttling were allowed, and a familiar sculptured group shows a cruel twisting of the arms to hold down the thrown wrestler. Ring fighting was practised by both boys and men among early Germans, as numerous ethnological remains demonstrate. In Japan, prize fighting is as much a national sport as is bull baiting in Spain. Bastian saw it in Burma, Ratzel among the Eskimos, Indians, Hawaiians, etc., and other observers in remote parts of the earth. Among the Brazilian Bororó friendly contests are governed by the following rules: "To seize a man by his right wrist is a challenge. The two contestants face one another, and each places his hands on the other's shoulders or on the small of the back. In this position they must stand with bodies perfectly erect,[361] their feet wide apart, and each looking toward the other's back. They maintain a good-humoured silence for

some time, and then suddenly become very much in earnest, and make desperate efforts to throw one another by tripping. One usually opens the attack by thrusting one of his heels into the knee hollow of his opponent and trying to bend it, but the other is prepared, and sets his sturdy leg so far back that the effort is fruitless. Attack and resistance on both sides follow in rapid succession until one of the contestants falls."[362]

Here, too, is opportunity for the application of the wiles practised by Odysseus when the mighty Ajax lifted him off his feet.

"... Still his craft not deserted Odysseus:
He dealt a blow from the back and loosened the joint of his knee
So that backward he fell and Odysseus sank down above him
Right on his broad chest. And the people around were amazed."

In von den Steinen's description of the Brazilian customs, the effort to pull down the head, mentioned above in connection with childish wrestling, is dwelt upon as the chief aim instead of the grip on the waist. "The contestants, representatives of different tribes, come forward in pairs, their bodies smeared with yellowish red *uruku*, and with black. They stoop, catch up a handful of sand, and in a crouching position, with hands hanging down, they rapidly circle round each other, casting angry glances at their opponents, and calling out threateningly, 'Húuha! húuha!' Then one touches his right hand to his adversary's left, and at this signal they all leap to the attack, springing up and down as fast as possible on the same spot, not unlike angry apes, each seeking to seize and bend down the other's head. This violent exercise goes on for some time without any direct attempt to throw one another. They are very friendly after it is over, and may be seen walking about with their arms around each other's shoulders."

As a last example I quote Berlepsch's graphic description of the Schwingen as practised in the Swiss Alps. Shirt and trunks are the only articles of clothing allowed, and the latter expose half the thigh, and must be made of stout, strong drilling. Every man grasps with his right hand the waistband of his opponent, and with his left the rolled-up trouser leg, and now begin, either standing or kneeling, violent efforts to overthrow one another. For a complete conquest this must be accomplished twice.[363] The struggle is especially exciting when the contestants represent different valleys, and on them rests the responsibility of maintaining the honour of their native place. "As soon as the two athletes have taken the proper grip they sink on their right knees and withdraw the lower part of the body as far as a good hold will permit. If one has reason to fear that he is about to be lifted, he lies flat down on his stomach and the other must follow suit. In this unnatural position they torment one another for half an hour at a time, writhing on the ground like snakes, and stretching sinews and muscles until their faces grow dark with the strain. If neither can manage to overcome his opponent by endurance, superior strength, or strategy, they at last voluntarily abandon the conflict, utterly exhausted, and shake hands on their prowess, but neither can claim a victory."[364] So-called tests of strength are similar to this.[365] In pulling contests the attempt is made to draw the opponent toward one, sometimes by the hands—in the Bavarian mountains it is done by hooking the

middle fingers together—sometimes by seizing a stick at its ends or across, sometimes with a rope, as the Greek boys did, sometimes by a band around the neck, which serves to strengthen the muscles of the back,[366] and sometimes by hooking one knee of each together, so that the contestants can only hop about on one foot until the contest is decided. Another test of strength is the pushing which children usually take up of themselves, as many schoolroom benches could testify. In Japanese contests pushing across a line seems to be a leading feature. Zettler gives the following description of it: "Japanese prize fighters are trained to their profession through centuries of inheritance from father to son, and by every conceivable means calculated to produce perfect specimens of their kind. In stature they are veritable giants, not only in height but in the development of all the limbs and masses of fat, which would not lead one to expect special adroitness or muscular force. In their ring contests the effort is made either to throw or to push one another off the arena, which is an elevated circular platform thickly strewn with sand and surrounded with a double ring of straw. Whoever makes one step over the edge is lost. Weight is of great use in this contest." Children frequently make use of a combination of pulling and pushing, which is really imitative play. One child, for instance, takes his position on a sand heap and defends himself against another who represents the enemy storming his castle. From the well-nigh innumerable tests of strength we may select the following as typical: The players stand with outstretched arms opposite one another, seize hands and pull, or one stands firm with stiffened arms while the other tries to stir him, or they sit in such a way that the knees of one are caught between those of the other, and the effort is made to force the legs apart; or sometimes it is to open the rolled-up fist, etc.[367]

Fighting with fists leads the way to fighting with weapons, though the rolled-up fist is used by the angry child as a weapon earlier than the open hand. In playful fighting, however, the blow with the fist is not much used. Sometimes a little playful boxing is indulged in, but it is difficult to keep within the bounds of play in a fisticuff. Gymnastic exercises of this kind as practised by the Greeks and English are more important. Among the former blows were aimed at the head, and, "to strengthen the blow," says Fedde, "the fist and forearm were wrapped with thongs of oxhide, which left the fingers free to double up the fist. Later a strip or ring of hard leather was added, which, as it was held around the ball of the fist, inflicted severe wounds, being sometimes studded with nails or lead knobs. The soft leather thongs of earlier times were called friends (μείλιγαι), while the dangerous knobs in later use received the name of bullets (σφαῖραι), and a specially cruel kind of gloves were ants (μύρμηκες)."[368] That not only

practised athletes used these, and that they were donned in the playful contests of mere boys, is proved by the speech of Lucien's Scythian, Anacharsis. "And those standing so straight there," he says as he is observing the youthful sports, "beat one another and kick with the feet. There is one who has been hit on the chin, and his mouth is full of blood and sand, and his teeth almost knocked out, poor fellow, and yet the archon does not separate them and end the strife. On the contrary, he urges them on and praises the one who gives the blow."[369] Raydt says of English boxing: "An English specialty in physical exercise is boxing, practised methodically and with all possible skill. The fists are incased in thickly wadded gloves, which render the blows harmless, and a distinction is made between extreme severity and lighter strokes, the tactics admitting of felling an opponent by the former or exhausting him with the latter. The boxing which I have seen was carried on in an orderly and decorous manner, and still I was convinced that it is a very severe exercise, and should not be introduced into the schools."[370] Regular boxing matches, requiring seconds and an umpire, as they are given by the students, are fought either to settle some dispute—"Fighting with fists is the natural and English way for English boys to settle their quarrels," is said in Tom Brown's School Days—or as a spectacle for a large audience to witness. In both cases it is fighting play only when the belligerent instinct as such forms the chief motive, and when, too, the quarrel in one case, or the prize offered and desire for self-display in the other, gives occasion for the exercise of the fighting instinct. There can be no doubt that this is often the case. Like our own students, English youths often fight, not because they have any quarrel, but because they seek one, because they want to fight, and the struggle thus becomes not the means but actually the end. The case is frequently the same with prize fighting. Professional boxers at the beginning of the nineteenth century were to a great extent rough fellows, who were only after money, or at best notoriety. But Conan Doyle has recently given us in his Rodney Stone a masterly description of a blacksmith who was a good husband and a skilful workman, yet even in his old age could not resist an invitation to take part in a public prize fight. What primarily influenced this man was a deep-rooted manly enjoyment of fighting for the fight's sake, and many Greek and English athletes have felt as he did.

Another primitive method of fighting is by throwing missiles; even monkeys throw stones, dry branches, and fruit. Miss Romanes's ape was very sensitive to ridicule. One day the tailoress came into the room, and a nut was given to the monkey to open with his hammer, as he knew how to do. The nut proved to be empty, and the woman could not help laughing at the monkey's blank

expression. “He then became very angry, and threw at her everything he could lay his hands on—first the nut, then the hammer, then a coffee-pot, which he seized out of the grate, and lastly all his own shawls. He threw things with great force and precision by holding them in both hands and extending his long arms well back over his head before projecting the missile, standing erect the while.”[371]

The child begins very early to throw things to the ground, as we have seen, and seems to delight in watching their motion as well as in the noise. Later the child turns the skill thus acquired to the account of his fighting instinct, and in this way genuine offensive throwing begins as soon as he is able to tumble about alone. The enjoyment is doubled when it becomes not only a question of hitting the enemy, but of dodging his missiles as well. The prettiest and most harmless form of such sport is snowballing; but also fruit, cherry stones, clods of earth, pebbles, hay in the meadows, pillows from the beds, etc., all serve the same purpose. Some games of ball, too, are of a similar character. K. Weinhold tells us how he as a boy played against his comrades with a six-pound cannon ball. The wonder is that no bones were broken. “Less fortunate,” he continues, “were the islanders who indulged in this mad folly, for in their case it was punished. On a holiday the contest between boatmen and landsmen was begun, and after several days the latter retired as victors. The boatmen, stung by the taunts of their conquerors, took counsel with their friend Hard Grimkelssohn, who advised them to make balls of horn and challenge the shore people to another game. That evening six of the latter lay dead, while the boatmen lost not a single man.”[372] In many ball games, however, the players do not themselves catch the ball, which is sent to a base or home, as in the English game of football. Behind each party is a base consisting of two upright posts and a connecting rod, and each side endeavours to get the ball over the other’s base or to prevent such a result when it threatens their own. This is a specialized form of reciprocal mass contest, since the enemy is not attacked in person, but the effort is made to wrest from him a symbolic stronghold, as is common in mental contests. There are many similar ball games—for instance, baseball—where the ball is thrown by hand and its analogue found among the North American Indians; and cricket, where a single player, armed with a bat, defends the easily approached wicket. The idea is carried further when the ball which is thrown becomes the goal as well, so that the same instrument is at once weapon and symbol of the enemy. Playful pelting is indulged in in carnival times, when berries and confetti are thrown about promiscuously; in former times there were many occasions for this lively sort of play. Travellers experience the primitive impulse which makes it hard for them

to resist the temptation to throw when in midsummer they stand in a little snow field, and students are universally given to throwing beer mugs, in spite of its being occasionally dangerous. The principle of returning offensive missiles is not much applied in play, and yet I remember that as a boy I enjoyed shooting with bow and arrow at another boy similarly armed. We stood about fifteen feet apart and tried to hit each other with light and harmless cane arrows. A still more innocent battle was fought with popgun and berries.

It is doubtful whether children really play with thrusting weapons; they rather exercise than fight with their wooden swords and spears, but when it comes to an offensive use of the weapons play turns to earnest, and, as with the young Goethe, ends disastrously in quarrelling and blows. Boys who are much older engage in actual fighting plays with such weapons, but it is left to the students' duels to exhibit its highly developed form. Some years ago the half-grown sons of a professor in a university town went to a fencing hall and fought out a regular contest in a perfectly friendly spirit, although it was by no means bloodless. Many readers will no doubt recall such incidents. Such contests between boys and young men are very interesting, and in Germany we distinguish between them and real duels in that they are playful, while the latter are brought about by some serious offence. That serious wounds sometimes result from these fencing matches is no argument against their playful character, for many games are dangerous, and these contests certainly come within our definition of a play, the satisfaction afforded by them being not in conquest but in fighting as such. When, indeed, one student provokes another intentionally from dislike or anger, the fighting which results is not a play; but the elaborately arranged appointments and the fencing matches which result from some remarks made, perhaps, in all courtesy, though it may end in injury to one or both parties, undoubtedly is of this character.[373] In the same way must have been managed the jousts and tourneys of the middle ages, the knightly combats of ancient Teutons, and youthful trials at arms and many similar contests as practised by various peoples[374] where, so long as there is no evidence of a quarrel, but only a natural demand to satisfy an inborn impulse to fight, it is all playful. We must not forget, however, that the desire for self-exhibition, to display one's skill and courage, is also conspicuous.

This subject brings us to a question which I touched upon in The Play of Animals. In reviewing the fighting plays of animals we found that many mammals and birds fight hotly in youth who seldom beard an enemy in later life, habitually taking to flight when attacked. The supposition in such cases must be that fighting play serves as practice for the mating contest, since even the

peaceful ruminants engage in bitter combat with rivals. This supposition granted, we may further assume that the fighting plays of the fiercer animals are also connected with the sexual life, and may it not be true with men as well? It is indisputable, of course, that human combat with wild beasts and other enemies is often a struggle for food and ownership, and accordingly, in considering play as preparatory for serious fighting, its aim must be considered as only partially sexual. Still, the connection is sufficiently close to deserve a few words of mention.[375] A great difference is observable in the tussling of boys as they approach maturity. While the games of six-year-olds are uniformly harmless, and proceed amid laughter and fun, as the age of puberty approaches fighting play assumes a much more serious character, and even when only play is intended the whole bearing of the participants is greatly modified. Genuine make-believe, the innocent measuring of strength, is no longer practised; the youth desires to prove that he can play with danger, too; he assumes an offensive and boastful air, and regards each of his contemporaries as a rival. The inward restlessness which characterizes this time of life is directed by instinct toward belligerence, and every opportunity to fight is welcomed. It is at this time that the weapons, properly blunted or otherwise rendered less effective, may still be dangerous, for youths of all vigorous peoples will engage in some kind of spirited combat. Take, for example, the description of London boys, by Fitz Stephen, who lived in the time of Henry II. We find not only the nobility, but the merchant class as well, exercising themselves at all times of the year in armed contests, which, in spite of their playful character, often had serious results. In the dead of winter, often on ice, they assembled for this purpose, with staves for lances, held jousts "from which they did not always escape uninjured, for many were the legs and arms broken in the fray. But the youths, in their desire for glory, delighted in such practice, which served as a preparation for the time when they should go to war."[376]

While we are obliged to attribute a very general significance to such dangerous indulgence of daring warlike spirit, still we can not fail to trace its connection with sexual life. Without the youth's necessarily knowing it, there is something similar to the bellicose tendency exhibited by animals in their pairing season, in the feeling of rivalry which possesses him at this time. The same thing is shown in the spirit of adventure, which at first is only a general desire for change, and delight in struggle and risk, but in its manifestations that are most closely connected with play appears in many mediæval knights in close conjunction with courtship. "The heroic deeds of adventurous knights," says Alwin Schultz, "should be included in the category of fighting plays. Thus Ulrich von

Lichtenstein, in his open letter to all knights, promised to every knight who would break a lance with him on his homeward journey from Venice to Bohemia a gold ring for his sweetheart, and to any one who should unhorse him the steed on which he rode; while in case he himself came out conqueror all he required was that the vanquished knight should pay homage to his lady." Another knight, Waltman von Lättelstedt, took with him on a ride from Merseberg to Eisenach a damsel on a palfrey, having with her a sparrowhawk and a hunting dog. "Waltman proclaimed that on his arrival at Eisenach he would be ready to fight all comers, and that whoever should overcome him could have the girl, the palfrey, the sparrowhawk, and even the dog and harness, but must permit the girl to ransom herself if she chose with a guilder and a gold ring. Whomsoever he should overthrow must give to him, as well as to the maiden, a ring of equal value. When she came back from Eisenach this young girl had gold rings enough to bestow one on every maid of high degree in all the town of Merseberg."[377] Such contests were more formidable with the North Germans. Among these warriors it was common for a hero to travel to a distant land, and when a woman there pleased him, to demand her surrender from husband or father or brother in two weeks' time, the demand to be supported in the lists.[378]

And finally it may be mentioned that the tourney, which was at first practised chiefly as preparatory for war, became later as often a contest for a woman. In one English tilt the king promised the kiss of an eight-year-old girl as the reward of success, and Eastern tourneys were often instituted to win the hand of a princess.[379] What was there done with intention may often unconsciously ground the various contests of young men.

2. *Direct Mental Contests*

The impulse to opposition is a quality which is usually regarded as a very unpleasant disposition of mind, but which is in reality, when kept within proper bounds, the very leaven of human life. We shall see later that rivalry taken in connection with the imitative impulse is one of the mainsprings of advance of culture, and the oppositional force connected with the fighting instinct is also necessary for the mental development of mankind. The great newcomers in the various departments of learning are almost invariably either friendly or bitter opponents of long standing authorities, and any project which meets with no opposition sinks to sleep. For the individual, too, it is quite as important, since a man without it would be entirely too hospitable to suggestion; indeed, abnormal suggestibility rests finally on the suspension of this instinct. Children early show

a playful as well as an earnest resistance to authority. While Sully is right when he says that an attitude of absolute hostility to law on the part of the child would make education impossible, still he admits that the best children—from a biological standpoint—have "most of the rebel" in them.[380] The sweetness of forbidden fruit is imparted largely by the combative instinct. Such a spirit is manifested playfully, not when disobedience is attended with cries and struggles or sulky behaviour, but when it is enjoyed for its own sake, as a source of triumphant satisfaction. When a two-year-old child who has been told not to throw his spoon under the table repeats the action, not in anger but with twinkling eyes, he is acting playfully. Some of their speeches, however, exhibit this spirit most clearly. For instance, a small boy who had been rather rough with his younger brother and was remonstrated with by his mother, asked, "Is he not my own brother?" and then cried triumphantly, when his mother admitted the undeniable fact, "Well, then, you said I could do what I please with my own things!"[381] Another child of three years and nine months answered his nurse who called him: "I can't come; I have to look for a flea!" and pretended to be doing so while he broke out in a roguish laugh.[382] A three-year-old Italian girl said to her grandmother under similar circumstances, "Non posso venire, la piccolina [her doll] mi succhia!"[383]

With children of school age, playful resistance to authority is naturally directed chiefly against the teacher. As an example I regretfully recall a piece of mischief of which I myself was guilty. I had looked back during a recitation to speak to the boy behind me, when the teacher called out to me to turn around. At that I turned around so completely as to be able to continue my conversation from the other side. The indulgent teacher was so amused at my impudence that he did not punish me as I deserved. Hans Hoffman has shown in his Ivan the Terrible how ill-mannered schoolboys can take advantage of a teacher who does not possess the secret of command; and Carl Vogt says of his school days at the gymnasium: "Study and work were for the majority secondary considerations. Most of the boys stayed there for the purpose of tormenting their fellow-students and enraging their teachers. By studying the peculiarities of character possessed by our tyrants we soon found a weak side to each of them and tried such experiments with these weaknesses as their owners could not avenge by punishment. Thus the whole school was leagued against the professoriat, and now single combat or skirmishing, now slyly preconcerted mass operations were for the time in favour, and there were occasional truces, but no lasting peace."[384] E. Eckstein's humorous sketches, too, are especially popular because of their celebration of this warfare against the teachers.

We have yet to notice adult opposition to political, scientific, artistic, social, and religious authority. It is of course usually serious, and yet it seems to me that in spite of its practical side there is often something playful in it, something of enjoyment of the conflict for its own sake. The obstructionist in legislation, the opponents of time-honoured regulations, customs, doctrines, rules of art and dogmas, all take, if they are born fighters, a peculiar pleasure in the excitement of resistance to authority. They like to blend their voices in the war cries of spiritual combat. It is one of the pleasures of life.

Contradiction is another form of opposition. I once snapped the fingers of my four-year-old nephew, Heinrich K., for some misbehaviour. After he had been quiet for a while, as was his habit, this dialogue passed between us, evidently soon becoming playful to the child: “Uncle, I’ll shut you up in a room so you can never get out.” “Oh, I’ll climb out of a window.” “Then I will shut the blinds.” “But I will open them.” “But I’ll nail them shut.” “Then I’ll saw a hole in the door.” “But I’ll have an iron door, very strong.” “Then I’ll make a hole in the floor.” “But I will go underneath and make iron walls to the whole house.” And so it went on until I gave up the struggle with childish inventiveness. Enjoyment of such playful dispute often lasts a lifetime. As a fourteen-year-old boy I once argued for hours with a friend as to whether the beauty of colour was relative or absolute. One of us contended that a blue embroidered chair might be positively ugly, however attractive the colour, while the other maintained that the beauty of the blue would make the chair admirable. I mention this trivial example only because it shows so plainly the playful character of such talk, for without any personal interest in the matter we waxed warm over our respective views and presented them with great energy. The heated discussion gave us quite as much satisfaction as solving the problem could have done; in fact, the charm of conversation is largely to be attributed to the enjoyment of disputation. On examining closely into what constitutes the attraction of such entertainment for us we find that besides relating and listening to anecdotes and gossip about acquaintances (this is also play) our chief pleasure is in more or less playful combating of opposite opinion. People who have no interest or talent for these three things are at a loss in society.

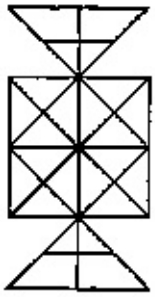
We now take up such intellectual contests as are commonly included in the lists of fighting plays, including the solution of riddles, to which we alluded under experimentation. The measuring of mental readiness between individuals when the problem is given orally by a third person, and this is the original and natural method, is a genuine intellectual duel. It was a favourite entertainment of the ancient Germans which Rückert has celebrated in his beautiful poem. Another

form is the putting of difficult questions alternately to opposed parties, as in our modern spelling bee. There are examples of this in the Eddas, such as the intellectual duels between Odin and a giant, and between Thor and the dwarf Alvis. Romantic troubadour songs belong here too. Uhland and Rückert once engaged in a metrical debate as to whether it is worse to find one's lover dead or faithless. Uhland preferred death, while Rückert attempted to sustain the thesis "better false than dead."[385] Rivalry is conspicuous in such contests, as we shall have occasion to note later.

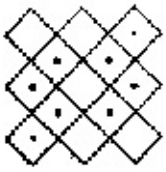
In our common forfeit games, too, mental contest often forms the basis of the fun. For instance, it is a distinct attack and parry when a handkerchief is thrown to a player and a word pronounced to which he must find a rhyme. In English, where the spoken and written words are so unlike, the spelling of unfamiliar words is turned into a game; and another idea is to introduce into a story some object or incident suggesting the name of one of the players, whereupon he must continue the recital, passing it on to another in the same way. Or a passage from some great author may be cited and his name guessed, and many similar devices. Finally, we mention the important group of plays for which the stimulus is partly intellectual experimentation, but is primarily attributable to the combative instinct, such as board and card games, both of which are symbolic of physical contests in which the players appear as leaders of opposing forces and originators of strategic operations. A genuine battle ground is afforded by the board, and the great object is to have the right man in the right place at the right time. In cards strategy is exhausted in the choice of the right champion at the right moment, but is rendered much more difficult by the fact that the former contestants have disappeared from view, while the reserve is concealed. Thus it results that board games afford opportunity for the display of skill in arrangement and card games especially cultivate memory, while both are important promoters of the logical faculty and of imaginative foresight.[386] An important distinction between them is that in board games the strength of the contestants is exactly equal at the start, and the material chances are identical, while in cards inequality is the rule.

Board plays (the name is not very fortunate, for the battlefield is by no means always a board) are older and more generally distributed than the others. When Lazarus points out reasoning games in distinction from games of chance as indicative of a higher state of culture[387] he can not be referring to board games in general, since some of the lowest and most savage tribes indulge in them. There are three distinct varieties of these plays. In the first kind one, or possibly

two, stand opposed to a large party, but the conditions are equalized by the rule that all the party must act together while the smaller side is rendered more formidable by various advantages, such as greater freedom of motion and capacity for lying in wait and taking prisoners. The object is to dislodge the single fighter from his stronghold and cut off his retreat, or to surround him in the open field and take him captive. The prototype of the former is the beleaguered fortress, and of the latter combats with dangerous beasts of prey. The Malay Rîman-Riman, or Tiger-play, is a good example of the latter. The arena is somewhat of this form and appearance, the figure being simply traced on the sand, or stamped with red and white on boards or cloth. The single player has twenty-four stones, the men, ôrang-ôrang. The other players have a single large one or sometimes two, the tiger, *rîman*. The tiger is governed by fixed rules, and the men seek to pen him up so that he can not move.[388]



In the second kind the parties, being numerically equal, stand opposed as in checkers, where a hot struggle goes on to get three men in a row—at least this is one of the simplest forms of the game as described by Ovid. Among German antiquities there is a representation of two men with a board set with stones. Schuster at least considers this a game similar to checkers.[389] And besides, there are groups engaged in the Damen-Spiele, which was probably known to the ancient Egyptians as well as the Greeks and Romans, although we can not be certain as to the rules of these ancient games, πόλις, *ludus latrunculorum*. In mediæval times elaborately ornamented boards were used for this game. “Especially noteworthy,” says Weinhold, “is one that is used as a reliquary on the altar at Asschaffenburg. It is set with jasper and beryl crystals, beneath which various figures are inlaid in the Roman manner on a gold ground.”[390] Büttikofer brought with him from Liberia a very interesting ethnological specimen, almost unique in character. The game played in that region does not require a board or other flat surface, but wooden cases into which rods are inserted like arrows in a quiver. This represents the placing of the men on a board. Each player has ten rods, of which only four are placed at the beginning of the game. The dots in the cut show their position. The object is to get into the enemy’s country by judicious jumping, the reserve ammunition being placed as occasion requires until the supply is exhausted.[391] Another form of this kind of game is the Oriental Mangale, which is now becoming quite general.[392] In Damascus, where, according to Petermann, it is constantly played in all the coffee houses, a board two feet by six inches is



used. It is over an inch thick and has in its upper side two parallel rows of holes, seven in number in Damascus; other places have six, eight, or nine. In these holes tiny pebbles, gathered in a particular valley by pilgrims to Mecca, are laid; usually seven in each. The player removes the stones from the first depression on his right, and throws them one by one toward the left and into the holes on his opponent's side. This play is kept up under certain rules and conditions, of course, and with the aid of much counting[393] of winnings, and whoever gets the most stones has the game.[394] In concluding we must not fail to notice the noblest of all board games, chess, which, on account of the great variety of men employed and their complicated moves, is the most difficult of games, as well as the most entertaining. Many are of the opinion that some ancient games are of the same character, but it is probable that real chess is of Indian origin, whence it spread to the Persians and Arabians, and through them into northern Africa, Sicily, Sardinia, and Spain. In the last-named country we hear of it as early as the ninth century, and it appeared in Italy and Germany certainly not later than the eleventh, soon becoming the favourite game of the educated classes. This is proved by the fact that in a book of sermons published in the latter half of the thirteenth century one Jacobus de Cessoles, a Dominican, attempts to set forth a system of rules for right living founded on the rules of the *ludus scaccorum*.[395] The game has naturally undergone many changes in the course of time; for instance, the Arabians originally had elephants in the place of our bishops; but it has always preserved the character of a battle, and is so represented in old Arabian manuscripts.[396]

Our third group of board plays is comprised of those which add the attraction of chance to intellectual enjoyment of the contest. It is true that to a certain degree chance is an element in the purest games of reason, since the most skilful player can not foresee all the consequences of a move, and various uncontrollable influences[397] may interfere with the best-laid plans; but in the games which we are now considering there is a blending of risk with calculation, which has a peculiar charm. Perhaps the most familiar game of this kind is backgammon, which was certainly known to the Greeks and Romans, and possibly to the Egyptians and Phœnicians. In this game and kindred ones the object is to throw away men whose value is determined chiefly by chance, while the advance to advantageous points is a matter of calculation, thus affording a combination of direct and indirect fighting. Backgammon is of peculiar ethnologic interest because of the prominent part it plays in the controversy as to whether Asiatic influence is traceable in primitive American civilization. E. B. Tylor has stated in several passages[398] that a kind of backgammon played on a cruciform board is a

favourite amusement of the East Indians, and is called by them Patschisi (in Burmah: Patschit), and a very similar form of the game was known to the pre-Columbian Mexicans under the name of Patolli. Tylor considers the complicated nature of the game as a sufficient disproof of its independent origin, and from this, and a certain kinship to chess which is apparent in it, he concludes that the whole group of games furnishes an important argument in favour of Asiatic influence on American life before the time of Columbus.

Dominoes may serve as the connecting link between such games as we have been considering and card games, since the lack of a prescribed field, the concealed store of each player, and the chance distribution at the beginning, as well as the acquisition of new ammunition during the game are common features. Playing cards are supposed to be a comparatively recent invention of the Chinese, which, like chess, was carried into Spain by the Saracens, and thence spread all over Europe in the fourteenth century. Many are of the opinion that they are a modification of chess, and in fact the oldest game known to be played with them is one of the most complicated that we have—namely, Taroc, which requires seventy-eight cards. It was played in Bologna in the beginning of the fifteenth century.

Since the victory in card games is not won by virtue of the position of the cards, but by their succession and value, the faculty of memory is largely concerned, as victor and vanquished at once disappear and the men yet unengaged are concealed. This and the inequality of the players' forces at the beginning constitute the distinguishing feature of cards. Lazarus's penetrating glance has descried the point which differentiates the various games, placing them in the varying relation of accident and calculation. "Not all games," he says, "are alike in this. There are some in which chance is predominant—as poker, for example, or the new game of bluff, so popular in America, where so much depends on the dealing, and the play is not so much a calculation as an attempt to exhaust one's opponent.... The stronger games, however, such as whist, Boston, l'hombre, solitaire, piquet, Skat, euchre, etc., depend on the sustained influence of both chance and calculation. After the cards are once distributed calculation begins, but chance continues to be powerful,[399] for at every play a new card enters into the combination and must be given its due weight, whether from the hand of friend or enemy. This is more obvious in the cases where the original force is recruited by drawing from the pack; yet even here attentive following of the progress of the game will furnish data for determining the probable situation of a third card, and thus, after all, skill has as much to do with it as chance. And in such a game as whist *en deux* in which all the cards are dealt, and each player

knows exactly the strength of his opponent, the whole thing depends on calculation, and consequently is not so attractive. It would be a game of chess with cards but for its inferiority in variety and combination."[400] Lazarus goes on to say why chance is indispensable in card games—namely, because, as there is no such thing as space combination, the monotony would be wearisome, and continued playing well-nigh impossible. Without Fortune's reverses, too, the games would necessarily be begun with equal forces, and it is easy to see how little enthusiasm such games would excite. Only in connection with chance, then, can Reason find in cards a task worthy of her powers, and, indeed, a small prize is a stimulus sometimes needed to keep up our interest. This may be a suitable place to mention that it was formerly the custom to play for money or some stake with all games of chance and even with chess.

I close this review of contests which are purely intellectual with two brief remarks, the first of which concerns the invention of board games. It is difficult to find a perfectly satisfactory answer to the question of their origin. However, their complication points to adults rather than children as their probable inventors, and to me the following consideration seems important: The primitive races, who find it difficult to convey their thoughts in speech, naturally take to marking on the sand, and hence the figures might arise.[401] If the leader of one of the more intelligent peoples wished to instruct them concerning some past or future combat, it would be a simple method of illustrating his meaning to draw an outline on the ground and represent the position of the hostile forces by small stones or similar objects whose movements would symbolize the manœuvres of the forces or the advances of knights for single combat. This would, no doubt, be exceedingly interesting to those conducting it, and also to the spectators, and might easily be repeated for the sake of the amusement afforded until some inventive genius turned it into a veritable play with board and men. To show that there is nothing improbable in this supposition we may point to the fact that such play is actually carried on by our own officers (Italian, *manovra sulla carta*).

The second remark relates to the pleasurable quality of games involving use of the reasoning faculty. We have already shown that play with reason takes the form of experimentation with imagination and the other intellectual faculties in their capacity of illusion workers as well as in their more constructive activity; now we find further that its recreative effect is much greater than is realized during the progress of the game, and that the consciousness of standing voluntarily in a world of our own creation may be a feature in the interest excited by the game.[402] The chief source of satisfaction, however, is enjoyment

of the fight, in the playful intellectual duel, where bold attack and skilful parry, systematic advance and stubborn resistance, crafty manœuvring and direct assault, single combat and the general skirmish, as well as pursuit and demolition, succeed one another in ever-renewed combinations. In those games which add the charm of uncertainty to the mental contest the effect is of course still more complicated. As I shall have occasion later to speak exhaustively of games of chance, I confine myself here to Lazarus's significant conclusion from the union of these contrasted forces. "That men, and, indeed, the same man can take pleasure in such opposite and absolutely contradictory principles of play seems wonderful, and yet it is most natural, for both are elements of human nature grounded in the very essence of his being and the normal manner of using his powers. In his serious, moral life, directed by the mandates of duty, he is also controlled by two contrary forces, freedom and necessity. He must bow to Fate and yet strive and struggle for what is his own. He expends his energies according to his own behests, and must then await success and reward till the turn of Fortune's wheel. Both disappointment and struggle, receiving and expending, suffering and toiling, are woven into the texture of his life and character, and become the sources of his volition as well as the arbiters of his fortune. He obeys both forces; to pursue and hold to what is good is his dual impulse, both in life and in play."[403]

3. *Physical Rivalry*

In playful competition indirect conquest of an opponent is aimed at, since the effort is to show that one can perform the task better than another. In it the fighting instinct assumes the form of rivalry. "No entreaties or commands," says Lazarus, "nor even tips, could arouse our coachman to such a display of skill and speed as could another coachman who showed a disposition to race with him. Apart from the fighting instinct itself, jealousy is the prime cause of rivalry". Spinoza defines it as "the desire for a thing aroused in us by the belief that others want it." One of the first manifestations of jealousy in children is with regard to the love and caresses of its parents; we all know at what an early age the infant expresses his disapproval when his mother pets another child—sometimes as early as the second quarter. If he shows it simply as anger he is plainly jealous, as older children are; but if (as a dog often does when the hand he loves strokes another) he tries to win to himself by all sorts of cajoleries the maternal tenderness, then he enters upon a sort of rivalry. True emulation, however, is first developed when the aim is to win approbation and admiration when praise rather than love is the alluring reward—in short, when the child becomes ambitious.

Say to a three- or four-year-old boy, “Your friend Otto can draw beautifully,” and it is ten to one that he will answer, “But I can draw better.” This desire to surpass others is what leads to the indirect contest which we call rivalry.

Imitation, too, plays the part of a first cause here, as Spinoza points out in pursuance of his definition of emulation. As, however, this subject will come up for discussion later, let it suffice to say here that imitation is exceedingly important for all mental and physical development, and is accordingly especially conspicuous in the play of children. The effort to say “I can, too,” easily takes on a certain hostile character when there is difficulty in attainment, and so imitation becomes actual rivalry as soon as the effort is for “I can do better,” and the struggle becomes sharper in proportion to the consciousness of a desire to surpass. Thus we are justified in regarding the impulse of jealousy which is related to the fighting instinct as the foundation of rivalry as well.

Before going on to investigate this playful rivalry it may be useful to inquire into its social significance. G. Tarde, in his interesting sociological study, Les lois de l’imitation,[404] attempts to prove that imitation is the mainspring of social evolution. But along with the peaceful operations of imitation, the fighting instinct, too, makes itself felt in manifold ways, as a principle of progress (as I remarked above in discussing combativeness), in conjunction it is true with imitation and usually under the form of rivalry. It is evident that social progress would be slow indeed if men only imitated and never opposed what is done in their presence. Rivalry in ownership, power, and authority is the force which urges each to do his utmost in the struggle for life, and which has produced the most advanced civilizations. A people without ambition is lost; not merely stationary, but actually decadent. As in art bald imitation of even the best models results in weakness, so in society. Men must will to do better in order to do as well.

In spite of their variety we can very quickly review the physical imitative games, since under movement-plays we have already noticed a considerable number belonging to this class, and since it is their psychological side alone that chiefly appeals to us. The following examples, then, are merely chosen to show by means of their variety the great importance of imitation in human play.[405] Children learn most of their bodily movements by such play in a way which clearly illustrates the mingled effects of imitation and emulation. When one child jumps off the second step, another child who sees him immediately tries to cover three; and when boys are practising their leaps each makes a mark in the sand beyond the others as his goal. To lift a heavier weight, to throw farther, to run

faster, to jump higher, to make a top spin longer, to stay longer under water, to shoot higher, farther, and with better aim than his comrades can, is the burning wish of every childish heart. In order to see the same enthusiastic rivalry in physical prowess exhibited by adults, we must turn to the half-civilized peoples to whom such acquirements are of surpassing value in the struggle for life. Among the ancient Germans, for example, such contests were carried to the highest degree of perfection, and, in spite of their avowedly playful character, conducted with such seriousness that they often became matters of life and death. Skill, prowess, and endurance in leaping, running, lifting and throwing huge stones, the use of bow and arrow, diving and swimming, riding and rowing, were all the subjects of contest, and each victor sought to surpass the achievements of the former one. All warlike peoples of whom ethnology is cognizant show much the same picture, and highly civilized nations, too, accord an important position to athletic contests, as the Greek and Roman games bear witness, as well as the championships and records of our own day. Rivalry enters, too, into such games as tenpins, billiards, croquet, golf, etc., all of which are favourite amusements. The pleasure they afford is complicated, including display of one's own strength and skill, the pleasure of watching others, the stimulus of rivalry and the satisfaction of overcoming an opponent. Sometimes, and especially in croquet and billiards, the contest closely approaches fighting play, since the participants not only try to attain the object of the game, but are apt to engage in direct hostilities.

We now turn to some examples that are better calculated to exhibit the many-sidedness of rivalry, which is, of course, an element in all the games of skill which we have mentioned. We are not so well prepared to find it in games requiring patient effort, yet even the Eskimos, in their Fadenfiguren, indulge in fierce emulation,[406] and a play as peaceful as kite-flying is not exempt. "The Hervey Islanders believe that once the god Tane challenged the god Rongo to a kite-flying contest, in which the latter won because his cord was longer."[407] In drinking there is rivalry in the effort to withstand the power of alcohol, and students have a time-honoured tradition that the man is a fine fellow and worthy of all respect who can drink the rest of the company under the table. It is more charitable to attribute this practice to rivalry rather than to love of drunkenness.[408] The instance of the two boys holding burning matches illustrates how readily the ability to suppress any manifestation of pain lends itself to rivalry. The old Germans tested their endurance by sitting at feasts after their battles, and when they were covered with wounds. In a grotesquely exaggerated saga it is related of the wounded sons of Thorbrand: "Thorodd got such a blow

in the neck that his head hung sideways; his hose were all bloody and would not meet. Snorri could see and feel that a sword was sticking in his thigh, but Thorodd said nothing. Among the gayest of the gay is Snorri, son of Thorbrand, who sits with the others at table, but eats little and looks white. When asked what ails him he says, 'When the vulture has won the fight he is not in haste to eat.' Then Gode looks at his neck and finds an arrow head at the root of his tongue."[409] The jeering of Walthar and Hagen, who vie with one another in mocking at their wounds, is another case in point. Finally, the passion for making collections, which is so strong in both children and adults, may be considered as a form of competitive rivalry which reaches its climax in the miser.

4. *Mental Rivalry*

The space devoted to the more general kinds of emulation has purposely been curtailed in order to devote more to the special case of gaming, as much of the ground has been covered already.

Children are fond of displaying their mental acquirements even before they are old enough to go to school, but it is there, of course, that the best opportunity is afforded them. Colozza tells us how the Italian children use their recess time for contests over the multiplication table.[410] During school hours recitation is easily transformed to emulation which can be turned to account by the judicious teacher with better results than are attained by one who tries to draw the line too rigidly between work and play.

The intellectual rivalries of adults are exceedingly varied. Music offers unlimited opportunities when people are far enough advanced to have any sort of society, and even primitive tribes indulge in this sort of entertainment. Among the Eskimos the contestants compete in public for the prize for singing, and then fall into actual combat, thus combining the two forms of rivalry. Grosse quotes from Rink the following musical dialogue between two East Greenlanders. "Savdlat: 'The south, the south, oh, the south over there! As I stood on the headland I saw Pulangitsissok, who had grown fat upon halibut. The people of this land know not how to speak. Therefore they are ashamed of their language. They are dumb over there; their speech is not like ours. In the north we speak in one way, different from those in the south. Therefore we can not understand their talk.'" To this challenge Pulangitsissok responds: "'There was a time, as Savdlat knows, when I was a good sledger, when I could take a heavy load on my kajak. Four years ago he found this out. That was the time when Savdlat bound his kajak to

mine for fear he might capsize. Then he could carry a good load on his kajak, too. As I was tugging along you cried out pitifully, and were afraid and almost overturned. I had to hold on to my ropes to keep us up.’”[411] Such sarcastic dialogue often leads to direct contests, in which the singers try to rout one another by means of their witty improvisations. A later form is the contest in oratory and song on an assigned theme, opening with a direct challenge between the contestants. The poem of Wartburg-Krieg is especially famed, while Plata’s symposium may be instanced as a fine example of competitive oratory on a given theme.

Other kinds of rivalry frequently arise in social gatherings, such as recounting experiences in love, hunting, and battle, as was pre-eminently the custom among the ancient Germans. “One after another,” says Weinhold,[412] “boasted of his prowess and sought to prove it by tales of his wonderful deeds. To heighten the effect, each chose an opponent worthy of his mettle. Thus it happened that Eystein and Sigurd, the crusader, both Norwegian kings, once had a controversy in court. Eystein advanced the proposition that it was impossible to live aright in society, and called on his brother to sustain the contrary. Then the travelled warrior Sigurd, who had filled all lands with the fame of his deeds, and the peace-loving, home-staying Eystein, each related what he had done and could do: the one his battles, his fame in the East; the other that he had built huts for poor fishers, made roads over rugged mountains, opened harbours, widened Christendom, and strengthened the Church—in short, extended his kingdom by every peaceable method. The talk became warm, and the silence which followed was ominous, but as they were both noble-hearted no harm came of it.” Very characteristic, too, is the Harbardhslied in the Edda, where the gods Wotan (under the name Harbardh) and Donar emulously recount their achievements:

Donar: “Do you ask what I did to Rungner,
The giant with sturdy heart and head of stone?
I felled him then, he lies at my feet.
And what did you, Harbardh, the while?”

Harbardh: “For more than five full winters
Was I on an island that is called Allgrün;
There I found men to fight and enemies to fell,
Many things to prove, and many maids to free,” etc.

Singing the praise of one’s future deeds is another form of such boasting. A company of carousing men have need of a wild boar or some other sin offering to go through their midst as they perjure themselves with oaths concerning the hazardous and difficult deeds which they mean to perform.

Before taking up games of chance again I mention once more the fact that many reasoning games are also rivalries—dominoes, for example, and backgammon[413]—since the chief effort is to reach a certain goal first and direct efforts are made to embarrass and retard the adversary, so that genuine fighting play results.

In chance games proper, however, the contestants do not attack one another directly, but seek to conquer by the better solution of some problem, the point of departure from other rivalries being that the reward of solution, at least in games of pure chance, is entirely accidental, and not dependent on the player’s strength or skill. We will now attempt to review the more important phenomena connected with such games, and later study the question in its psychological bearings.

The wager is akin to play with chance and arises from the holding of opposite opinions, which can only be settled by future events. Even if the bet concerns something which is past or present, still the decision must be in the future, and the fighting element comes in in the striving of each to prove his superiority, the interest being much enhanced by pooling the stakes. The bettor’s conviction as to the correctness of his opinion may be strong or weak[414]—absolute certainty destroys the validity of the bet, while absolute uncertainty makes it a mere game of chance, whereas it should depend, like the best card games, on a union of reasoning and hazard. For this reason future events are the proper subjects of the wager, and we will confine ourselves for brevity’s sake to such bets. Schaller says rightly: “The future is pre-eminently the object of conjecture, of the reckoning of probabilities. Even when present circumstances seem to tend inevitably to a certain result, there are still infinite possibilities that other results may transpire. Therefore the wager should concern something yet to come.”[415]

One of the earliest forms of betting was on physical or mental superiority, and the stakes formerly so common in reasoning games may be regarded in the same light. There was much betting on the victor in the old German riddle contests and life itself was sometimes staked, if we may depend on the ancient accounts. More often, though, physical prowess was the subject of the wager. "Indeed, Tacitus may be right," says Schuster, "when he records that the Germans disdained to be praised for ordinary physical vigour, yet they gave prizes to the victors in their contests and liked to claim the glory when it set them above others. Reputation with them must not be mere empty words; one must work for it to the full extent of his powers. Many examples illustrate this spirit; for instance, Welent and Amilias, the smiths, each boasted that he could not be surpassed in his art. The latter offered to bet on it, and Welent replied, 'I have not much property, but I will stake it all.' Then said Amilias, 'If you have nothing else, stake your head, and I will stake mine, and whichever of us is the better man shall cut the other's head off.' Two of Olaf Trygvason's retainers boasted of being superior mountain climbers, one wagering his ring on it, and the other his head."[416] Schuster cites, too, the famous contest in the Nibelungenlied, to which Brunhild thus challenges King Gunther:

> "She said: If he is your lord and you are in his hire,
> Tell him that I have sworn that whoever can resist my play,
> And prove himself my master there, him will I wed,
> While if I win you must go alone from hence."

Fable makes animals wager in the same way; the old tale of the hare and the hedgehog is found even in Africa, although there the hedgehog has become a tortoise.[417]

The stakes are not always, however, on one's own ability, but quite as often on the performances of others, or on the speed and endurance of animals. This is indeed the most popular form of the sport, doubtless because the agreeable tension of expectation is thus prolonged until the very moment of the *dénouement*, as it is not likely to be in the more personal contests. In riding, rowing, sailing, and running contests spectators, as well as participants, bet on the result.[418] "Betting on races," says E. v. Hartmann, "is the most dangerous and exciting form of gambling, being dependent purely on chance, and yet offering a false appearance of being essentially influenced by intelligence and judgment. The custom is fostered of raising the stakes at the last moment under the influence of artificial stimulation to interest during the race itself. Immature boys, sons of respectable labourers, are thus initiated in the fascinations of the passion for gaming who would otherwise have little inclination for it."[419] In

various parts of the world wagers are laid on the result of fights between animals. In ancient Greece gamecocks were bred with special care, and Tanagra, Rhodes, Chalcis, and Delos were famous for the achievements of their respective breeds. The birds were fed with garlic before the fight to augment their excitement, and were armed with artificial spurs. The stakes were often enormous.[420] Cock-fights in which betting seemed to be the principal feature were held during the middle ages in most European cities, and in some localities have survived to the present day. Malays are especially devoted to this sport. It only remains to add in conclusion that lifeless things, too, may be the subject of bets. The Gilbert Islanders set two sailboats, about four feet long, afloat, and bet as to which will sail fastest.[421] This is very near to being play with pure chance, and the wager of Canning with an English duke is even more so. They staked a hundred pounds on the question of who should meet most cats on a certain road.

There is but one opinion as to the origin of games of pure chance—namely, that they grew out of the serious questioning of Fate in the form of oracles, and colour is given to the theory by the custom of jesting with the oracle. The Greek custom of pouring wine into a metal cup and from the sound it made reading one's prospects in love, drawing straws—a practice which Walther von der Vogelweide has made famous—the various flower oracles, counting the cuckoo calls, observing the flight of birds—as, for example, how many times the kite circles—and many other such customs[422] were originally conducted seriously, with a view to gaining some knowledge of the future, and even when playfully practised smack of superstition. Tylor says, in his admirable study of this subject: "Soothsaying and games of chance are so closely allied that the instruments of each are used interchangeably, as among the clever Polynesian magicians cocoanuts are skilfully rolled about in a circle. In the Tonga Islands the chief use made of a holiday is to inquire whether the sick will be cured. They offered loud prayers to the family deity that he would place the nuts aright, then spun them, and from their position judged of the god's will. Under other circumstances, when the cocoanuts are rolled simply for amusement, no prayer is offered and no significance attached to the result. The Rev. G. Turner found the same custom in the Samoan Islands in another stage of development. There a company sits in a circle, the nuts are rolled about among them, and the oracle's answer depends on whether the monkey face of the nut is turned toward the questioner when it stops rolling. The Samoans formerly used this method to detect a thief, but now it is a forfeit game."[423] In this sort of play with chance there is nothing special at stake, yet it is no doubt closely connected with those forms which have this feature.

Another of the earliest of the manifold forms of chance games is the casting of lots. New Zealand wizards decide the fortunes of war by throwing staffs. If the stick which represents their own tribe falls on that of another, then a favourable outcome may be confidently expected to the battle. The Zulus have a similar ceremony, and the Hindus cast lots before the temple and supplicate the gods for victory. In the Iliad the crowd prayed with outstretched hands while the dice in Agamemnon's helmet decided who should be the first to fight Hector. Tacitus tells us that the German priests tossed three dice on a white cloth before they attempted to reveal the future.[424] The origin, then, of the use of dice in games of chance is indubitable. The ancient form of backgammon common in India and Mexico was played with lots instead of dice, as was also the case with the Arabian Tâb. Some Indian tribes use the simple casting of lots for gambling purposes. The Arabian does not throw, but draws lots as a substitute for the Meisir forbidden in the Koran.[425] The complicated Chinese game lotto is well known, and Bastian found a similar one used in Siam.[426] E. von Hartmann refers repeatedly in his Tagesfragen to our European lottery, combating the popular idea that it is reprehensible, and should not be fostered by the state. He sees in a well-conducted state lottery the best means of directing the ineradicable tendency to play games of chance into harmless channels. Money speculation is, as a rule, little different from a lottery, since the great majority of speculators have no more intimation of the outcome than is furnished by the law of probabilities which governs pure games of chance. Returning now to simpler manifestations, we find many which are closely related to the use of lots. North American Indians, who are zealous gamblers, use marked or coloured stones, seeds, and teeth, and stake their clothing, furniture, weapons, and, in fact, all that they possess. In Burmah a favourite game is played with beans, and in many of the villages a thrashing floor is erected for the express purpose of supplying the demand.[427] In Siam the children play with shells, and everything depends on whether the opening falls up or down.[428] A similar game was known to the Greeks, and in Rome a coin was tossed with the cry, "Caput aut navis!" equal to our "Heads or tails!" We must suppose that such play by children is derived from adult games of chance.

Astragalus and dice were the implements used in many such games. The former are peculiarly shaped bones from the ankles of sheep, goats, or calves, and their use for such purposes is very ancient. They are capable of resting on any one of four sides which may vary in value, as the six sides of dice. The Schliemann collection in the Berlin Museum contains some of them which were found in the "second city." In ancient Greece four astragali were used in the games of adults,

and were thrown either from the free hand or from a cup. Special names were given to the various throws, such as Aphrodite, Midas, Solon, Euripides, etc., and the worst throw was called, there as in Rome, the dog. The children of antiquity also played with these bones a game partly of chance and partly of skill, and Hellenic children use them to this day. Ulrichs saw them at Arachola on Parnassus. “The children there,” he says, “play with the astragalus, which is a small four-sided bone rounded at the end and so shaped as to be capable of resting on any of its sides. In the game the uppermost side is read, the commonest throw being that which brings the round end up and is called the baker or the donkey. Then follow the thief, the vizier, and, rarest of all, the king, the side which looks like an ear and is opposite the vizier.”[429]

The name vizier seems to point to Mohammedan influence, and indeed the children of Damascus have a special game of chance with astragalus in which the terms vizier and thief are both used.[430] Some think that ordinary dice are derived from the astragalus, but it would be difficult to prove, though their imitation in other materials seems to suggest it, as in the case of the oblong dice used by the Romans with cubical ones, and several hundred prehistoric dice found in Bohemia are of similar form. The Berlin Museum, too, has oblong dice from India and China, showing that they were widely used in the Orient, and Hyde points out in his history of games of chance that the Greek word κύβος is related to the Arabic *Kab*, which meant simply made of lamb’s bones. On the other hand, cubical dice with spots like ours are found in Theban graves, so that we can not be positive as to the priority of the astragalus.

Possibly cocoanut rolling was the primitive form of roulette as we have seen it used in half-religious, half-playful manner by the South Sea Islanders. The Berlin Museum has Chinese rolling dice through which a peg passes, projecting on each side or with the peg on one side only, and the ball tapering to a point on the other. According to Egede, Greenlanders have a sort of roulette, an oblong ball about which the players sit with the stake before them.[431] Another form of chance game is the morra, which was probably known to the ancient Egyptians, and was in all likelihood at first a clever method of calculating.[432] As a play the hands of all the players are thrown simultaneously into the air, and each must guess at the number of outstretched fingers without taking time to count. This amusement, still very popular among Italian peasants, was called by the Achæans “micare digitis.” In China, where it is zealously cultivated, it bears the name of “tsoey-moey.”[433] The North American Indians have a modification of it in their cane guessing—namely, the effort to locate a small object passed quickly

about in a company. It is used for gambling purposes, the Indians staking all that they have, even to their wives sometimes.[434] The “Kyohzvay” play is taken quite as seriously in Burmah. For this a stick is fixed among the folds of a tightly wrapped cord, and the game is won or lost[435] according as it is or is not successfully concealed.[436] The various games of cards afford by far the most important instances of play with chance, and their name is legion. We have not time even to glance at such games as faro, lansquenet, rouge et noir, trente et quarante, etc., except to say that they all depend on a combination of reason with chance, and so more speedily put an end to suspense as to who is the victor than do purely chance plays. We are now confronted by the difficult question of what it is that constitutes the demoniacal charm of gaming, whose power is demonstrated by the value of the stakes with which a man will tempt Fate. Every one is familiar with Tacitus’s description of the ancient Germans who, when they had lost everything else, staked their freedom and their life on the last throw. H. M. Schuster gives a long list of examples of Germans staking freedom, wife, and children, the clothes on their backs, life itself, yes, even their souls’ salvation when their passion for play was at its height. That this is a universal Aryan trait is shown by the Indian poem of Nala and Damayanti. The former, under the power of a hostile demon, loses at play with Pushkara his ornaments, jewelry, horses, wagons, and clothes. In vain his wife and followers seek to restrain his madness; for many months the ruinous play goes on until Nala has lost all his property and even his kingdom. Then as Pushkara, with loud laughing at the unlucky fellow, cried out that now he must put up his wife Damayanti, Nala rose from the table and walked away with his faithful wife, stripped as he was of all else. The Chinese, Siamese, and Burmese, too, are all passionate gamblers, and the Malays are famous for their wagers on animal fights. This is sufficient to show that the wonderfully strong attractive power of gaming, “le jeu-passion, dont le rôle tragique est vieux comme l’humanité,”[437] is the result of numerous causes whose aggregate, according to Fechner’s principle, is far greater than their numerical sum. Taking account of the essentials only, we still have a threefold phenomenon; these are, desire to win the stake, the stimulus of strong effects, and the impulse given by the fighting instinct.

Winning the stake is so important that without it games of chance become very flat and most unimpressive, as forms of entertainment. How is this to be explained? Sometimes it appears as veritable cupidity, the “fascination d’acquérir d’un bloc, sans peine, en un instant.”[438] The seductive chink of gold pieces is heard and visions of new names of wealth open before us, promising to deliver us from all burdens and dangers which in spite of their distance and

vagueness we strive to get possession of by a single turn of Fortune's wheel; the gold fever is at home in gambling dens. Yet—and I think this is important—as a rule, it is not mere greed for gain as such, but a feeling more refined. It is boundless delight in sudden good fortune that makes the unearned winnings so enticing. That inward striving after the absolute, which is so deeply rooted in the human breast, is concerned in the longing to experience at least one moment of exhilarating joy with which a single stroke of Fortune's wand sets our hearts aflame:

> "From the clouds it must fall,
> Such is the gift of the gods;
> And the strongest power of all
> Is that which belongs to the moment."

It would be misleading to suppose that all wagers in a game of chance are attributable to a desire to win, even in this refined sense. In so far as it is the chief motive, there is no real play at all, for it constitutes a serious aim wholly outside the sphere of play. There must be some other meaning to the intense delight in winning, and Lazarus, as usual, puts his finger on it. "Even for an onlooker, not pecuniarily interested, the charm increases with the value of the stake."[439] The stake serves not only to enhance the thought of winning the game, but intensifies the decisive moment.[440] A gambler must have excitement at any price, and he also wants to risk something; betting satisfies both demands.

The need for intense stimuli which we are so constantly encountering in the course of this inquiry appears as the second motive in our classification, and it is met by a storm of effects which betting excites. Consequently gambling is pre-eminently suited to supply this demand. I have already pointed out that betting on the performances of others is an especially popular form of gambling, since in this way alone can the excitement be enjoyed unimpaired by personal considerations. So, too, in games of pure chance, which relegate the player to comparative inactivity and impart a feeling of externality among its other effects. By far the most important of these effects is the contrast of the emotions of hope and fear, and often this simultaneous action of opposing passions is sufficient to stir the soul to its depths, since, as Lazarus penetratingly remarks, the result is in either case positive; the question is not, winning or not winning, it is winning or losing. This is another point which renders games of chance peculiarly fit for the production of exciting effects. Also besides fear and hope there is the tension of expectation and the shock of surprise to render the mental agitation more intense and varied. This explains why gambling is the last resort of the dissipated, worn-out man who needs sharp stimuli to arouse his exhausted powers.[441]

Gambling is, moreover, a fighting play, and this is doubtless one of its most important phases. There is no other form of play which displays in so many-sided a fashion the combativeness of human nature and with so slight expenditure of time and strength. There is the charm of danger as such, enjoyment of bold betting which in the changing course of the game is constantly renewed, and further indirect as well as direct battle with an opponent, for he who makes the best throw gets the best card. Besides all this there is the desire to win his wager, and by means of the steady augmenting of stakes it differs from all other fighting plays in affording at the last moment, when all seems lost, an opportunity of retrieving everything by a sudden overwhelming victory. And finally there is the defiance of the power of chance, or rather, if a religious rearing makes one scruple to put it in this form, we may call it a struggle with the powers of darkness.

The question now arises whether this is properly called a fight when the player can not influence the outcome, but must submit absolutely to the incalculable hazards of fortune. What right has he to congratulate himself on a victory for which he is in no way responsible? To this it may be answered that in addition to this subjective, psychological condition there is an active contest; for an illusion exists in connection with every game of chance that in some way the outcome is dependent on the capacity of the player, and a little reflection will show that this is characteristic of human nature. How else arises our naïve sense of worth or of shame? Are we not vain of physical beauty, of inherited advantages, and of riches which we have not earned? Does not the consciousness of deformity, stupidity, weakness, awkwardness, or even a lowly origin impart a feeling of shame and a sense of responsibility for our own shortcomings? We feel as if we had had a voice in the fashioning of our bodies and souls and a choice of our position in life—in short, as the vulgar saying has it, as if we had not been careful enough in the choice of our parents. Just in the same way we are proud of our luck in play. Luck is genius, and he whom it smiles upon is a hero.[442] This failure to discriminate between fortunate circumstance and personal merit is shown in a striking manner in popular poetry. Its heroes are often armed with magic weapons or directly assisted by higher powers who lend them supernatural strength or work ruin to their enemies. Such advantage is thus given them that the reflecting person has some difficulty in regarding their exploits as especially praiseworthy, yet the average hearer is undisturbed by such considerations. For instance, consider the invulnerability of Achilles and Siegfried’s Tarnkappe, which gave him in the fight with Brunhild “the strength of twelve men.”

In the case which we are considering, however, this habit of mind has a twofold significance: First, there is the personification of chance as fate, with whom the player struggles. Lazarus says: “Instead of blind chance, he pictures before him a reasoning intelligence whose laws he tries to fathom, and in the face of many failures and mistaken conclusions he persists in attempting to calculate his chances and to count on them, forgetting that the reckoning of probabilities is useful only in generalities and is practically worthless when applied to a single case. By and bye he endows luck with moral qualities as well. He will risk everything on a single card, and either can not believe that Fate will be inexorable, that his faith and perseverance must at last be rewarded, or else assumes an attitude of defiance to a hostile being.”[443] In the second place, the gambler regards the implements of his trade as does the magician among primitive peoples the means of performing his incantations. It is actual fetich worship in which personification assumes proportions quite different from those it bears in the general idea of fate. Demons who sometimes obey the player’s will, and sometimes mockingly defy him, seem to dwell in the dice and cards, transforming play into a contest in magic arts. This is perhaps not so strongly felt by cultivated people of the present day as I have represented it, yet it is present in a more or less rudimentary form in all devotees of the game. While some scoff at it, even they avoid those things which are traditionally supposed to bring ill luck. Thus, when I was a student, in our games with dice which were very popular, the following rules were rigidly observed: In order to throw double sixes, the player took the dice cup in his right hand, placed the left over it and shook it solemnly three times up and down before making the final throw. If low numbers were desired, the inverted cup was held slantingly and drawn carefully back on the table so that the dice glided out rather than rolled. For medium throws there was a choice between two methods over whose comparative efficacy there was serious controversy: either to rise from the table and empty the cup from a height, or to propel the dice suddenly by a sidelong movement from the cup, held at a slant. Was all this mere joking? To a certain extent certainly it was, yet the boys half believed in it and had a poor opinion of beginners who did not know how to handle the dice. Among the lower classes, however, and among peoples of less advanced civilization this fetichism is much stronger. Konrad von Haslan, says Schuster, testifies to having seen and heard “how on the one hand dice are honoured, greeted, and kissed, and have offerings of booty made to them, while on the other they were beaten and abused as if they possessed life. Often the player who has lost by them takes revenge by picking out the spots or smashing the dice with a stone or biting them in two to make

them suffer."[444] All these circumstances combine to make gaming a fighting play not alone with men, but also with supernatural powers whose inscrutable decisions possess a peculiar power and whose favour lends to the fortunate player a special nimbus, while the vanquished does not suffer in his own esteem as if he had been conquered by a human foe.

Finally, we should note that gaming has various mental connections with experimentation, since enjoyment of the excitation of hope and fear and the feeling of suspense as well as the shock of surprise is experimental in every case. With this is combined great activity of attention and imagination to whose agency the personification of which we have spoken must be ascribed; reason's part in the process is displayed in the complex calculation of probabilities, and that of the will most conspicuously in the effort to appear outwardly calm while the wildest excitement reigns within, and hope and despair surge in alternate waves across the soul.

It is difficult to say which of these stimuli ought to be placed at the head of the list, but two appear to me to be rather more important than the others. First, the combative impulse, whose influence is particularly strong here; and, second, pleasure in intense effects, as when the "gold fever" takes the form of longing for a supreme moment which shall fill the soul to the brim, something which will transcend all other transporting agents. Both find their satisfaction at the gaming table, owing to the suddenness and importance of its revelations. In concluding, it may be remarked that the extraordinary persistence of gamblers, who sometimes sit all night at the table, as if hypnotized, may be at least partly explained by the law of repetition taken in conjunction with the independent attractions of the game. The performance of the last part of a mechanically repeated action tends to lead to the production of the first part again.

5. *The Destructive Impulse*

Turning our attention now to the third of our principal groups of fighting plays, the first subject—namely, the destructive impulse—will not occupy us long, as we have already given some consideration to it in the section on analytic movement-play. There we were chiefly concerned with the experimental element as manifested in the desire to take things to pieces. Here we shall emphasize the fighting instinct which is so easily aroused even toward a lifeless object, and frequently becomes a sort of delirium which is only appeased by the entire destruction of the object, as if it were a vanquished foe. And here, too, belongs the inquiry under what circumstances the discharge of this impulse, whether

directed against a living or a lifeless object, may be considered as playful. As soon as rage ceases to be the chief influence, and the destruction is continued simply for the sake of its intoxicating effects, it takes on more or less of a playful character, though it is inexpedient to attempt to set clearly defined limits to what is earnest and what is play.[445] When children tear paper or overturn structures laboriously erected by themselves, how often the interest is cumulative, developing finally into passionate eagerness from action which was at first indifferent! The paper is seized in the teeth, the building kicked to bits, objects which are breakable entirely destroyed, flowers pulled to pieces, etc. Education should interfere at this point and direct the play, imposing proper checks. Madame Necker de Saussure relates of a previously gentle and tractable girl of eighteen months that "one day when she was alone with her mother, who was confined to her bed from illness, the child, without the least provocation, broke into open rebellion. Clothes, hats, fans, and every movable object that she could lay her hands on were piled in the middle of the floor, and she danced around the pile and sang with the greatest delight. Her mother's serious displeasure had no restraining effect."[446] "A girl three years old," says Paolo Lombroso, "was left alone for a few moments, and proved her ability to improve the time. She at once began most energetically, and with full consciousness of what she was doing, to pull to pieces a basket of vegetables. She reduced all these to fragments, and then emptied an inkstand in her lap, amusing herself by smearing it on the wall and floor with her fingers. When that palled she took a corkscrew and punched her apron as full of holes as a sieve."[447] A little later in life the impulse leads to more violent misdemeanours. The destruction of garden borders, smashing of furniture in public parks, and many other acts of vandalism which we prosecute, are practised by half-grown lads, and sometimes even by students.[448] Some may object to calling such roughness play, but play it surely is if there is no malicious intention, as is usually the case. Such mischief is often reprehensible, and deserves to be checked, yet such antics as those of the subalterns as described by Eugen Thossan can not be taken seriously. He says: "Suddenly a beer mug flew across the table and hit Sergeant Putz square in the face. This was the signal for a general free fight. Steins flew through the air like cannon balls. Four lamps borrowed from the officers' rooms were on the table; one was struck and the chimney fell off. Somebody called out 'When the chimney is gone the lamp may as well follow,' and a blow from a fist shattered the lamp. A mad rage for destruction was kindled, and with anything that came to hand all the lamps were beaten to pieces. In the general hullabaloo no one noticed the wounds that he received from the splinters and blows. When every vestige was demolished, a

frightful war whoop rose to the hall above." It is more than probable that such orgies as this often have a certain connection with the sexual life. We find among animals—deer, buffalo, etc.—a similar rage for destruction during their breeding season.

My last example refers to mature men. It is the vigorous description in Vischer's Auch Einer of the argument of two friends in an inn about the china displayed around them. "At last Auch Einer called out: 'That is enough; they are condemned.' He bought the whole collection from the innkeeper and then let himself loose. He handed me the pitcher with the remark that I should have the honour of opening the ball. I was not slow to obey, and as a massive granite block stood opposite the window I sent the pitcher crashing against it. Auch Einer was delighted, and, seizing a vinegar cruet, followed suit. Then we took turns with plates, dishes, glasses, and whatever came to hand. A crowd of villagers soon collected outside and cheered the rare sport; loud laughter and cries of 'Go it, there!' greeted each act of justice."

Injurious treatment of living creatures, too, is often due to the same instinct. In the desire to investigate, the principle of the golden rule is forgotten. It would be too optimistic, however, to assume that such things are never done from cruelty. Fischart says that even well-disposed children reveal the demon of fighting and destruction when there is a beetle or a broken-winged bird or a wounded cat to torment. Most readers will recall some reminiscence of their own youth when they really enjoyed inflicting injury on some living thing. It may assume a dangerous form when directed against other persons. Some years ago a number of children at play intentionally drowned a comrade; and Fr. Scholz tells us, "An eight-year-old girl with an angelic face secretly put some pins in her little brother's food, and calmly awaited the catastrophe, which fortunately was averted." "A girl twelve years old pushed a child of three, with whom she was playing, into a pile of paving stones for no other reason than that she might have the opportunity to tickle him cruelly."[449] Among criminals murders may sometimes result from following this impulse. Some time ago three peasants were tried for the murder, with incredible cruelty, of a servant. They were father, son, and mother. After the old man had throttled his victim he said to his accomplices, "Now he is dead enough." But the woman, to make sure, dealt a hard blow on the poor fellow's head. "Now I think he has had enough, this fine rabbit that we have caught."[450] Here the bounds between play and earnest are hard to place, but probably belong at the point where the prearranged plan is no longer the leading thought, it having given place to mad delight in inflicting injury. These matters are, after all, only on the threshold of play, and we will

now turn our attention to subjects more important to our inquiry.

6. *Teasing*[451]

The fighting instinct of mankind is so intense that all the playful duels, mass conflicts, single combats, and contests which we have described, do not satisfy it. When there is no occasion for an actual testing of their powers, children and adults turn their belligerent tendencies into a means of amusement, and so arise those playful attacks, provocations, and challenges which we class together under the general name of teasing. The roughest if not the earliest form of such play is that of bodily attack, such as is often observed among animals. A female ape which Brehm brought to Germany loved to annoy the sullen house dog. "When he had stretched himself as usual on the greensward, the roguish monkey would appear and, seeing with satisfaction that he was fast asleep, seize him softly by the tail and wake him by a sudden jerk of that member. The enraged dog would fly at his tormentor, barking and growling, while the monkey took a defensive position, striking repeatedly on the ground with her large hand and awaiting the enemy's attack. The dog could never reach her, though, for, to his unbounded rage, as he made a rush for her, she sprang at one bound far over his head, and the next moment had him again by the tail."[452] We all know how children delight in just such teasing. To throw an unsuspecting comrade suddenly on his back, to box him or tickle and pinch him, to knock off his cap, pull his hair, take his biscuit from his hand, and if he is small hold it so high that the victim leaps after it in vain—all this gives the aggressor an agreeable feeling of superiority, and he enjoys the anger or alarm of his victim. When I was in one of the lower gymnasium classes our singing on one occasion was suddenly broken into by a shrill scream. One of the pupils had found a pin which he energetically pushed into an inviting spot in the anatomy of the boy in front of him. The culprit could only say in palliation of his offence that he did it "without thinking," which excuse was received rather incredulously. Schoolboys often pull out small handfuls of one another's hair, and it is a point of honour not to display any feeling during the process. Becq de Fouquières records an ancient trick of this kind, consisting of a blow on the ear in conjunction with a simultaneous fillip of the nose. Cold water is a time-honoured instrument of torture. To duck the timid bather who is cautiously stepping into the pond, to empty a pitcher on a heedless passer-by, to place a vessel full of water so that the inmate of a room will overturn it on opening the door—these are jokes familiar wherever merry young people are found. The lover of teasing naturally seeks such victims as are defenceless against him, especially those who are physically

weak or so situated as to be incapable of revenge. Yet there are ways of annoying the strong and capable. A good-natured teacher is apt to be the subject of his pupils' pranks, though in this case they seldom take the form of physical assaults. It is not an unheard-of thing, however, for a paper ball to hit his head or for his seat to be smeared with ink or perhaps with glue as in Messerschmidt's Sapiens Stultitia.[453]

Youths and grown men are little behind the children in such jests. There is, for instance, the christening on board ship in honour of crossing the line which Leopold Wagner thinks is derived from the ancient religious ceremony celebrated on passing the pillars of Hercules.[454] Tossing in a blanket, which made such a lasting impression on Sancho Panza, was known to the Romans by the name of *sagatio*. Such rough sports were practised in the time of the Roman emperors by noble youths. Suetonius relates of Otho that the future emperor as a young man often seized, with his companions, upon weak or drunken fellows at night, and tossed them on a soldier's mantle (distento sago impositum in sublime jactare).[455] In popular festivities fighting with pigs' bladders is a fruitful source of amusements to which tickling with a peacock's feather is a modern addition, and lassoing with curled strips of paper which cling about the neck. Students make a specialty of such pranks. A favourite one was crowding, when the streets had only a narrow pavement for pedestrians, while in bad weather the rest of the road was a mass of unfathomable mud; another was to deal a hard blow on the high hat of some worthy Philistine, plunging him suddenly into hopeless darkness, or tracing a circle on the bald head of a toper asleep over his wine, etc. In an inn in Giessen there is still in existence a bench through whose seat a nail projects when a hidden cord is pulled—a pleasant surprise for the unsuspecting guest who reclines upon it. On entering the gymnasium I was initiated in an æsthetic little practice which is of ancient date and serves as an instance of the coarse jesting that is so common there. One of the company secretly fills his mouth with beer and reclines on two chairs. With a handkerchief spread over his face he plays the part of The Innkeeper's Daughter. They all sing the familiar song, and two accomplices play the rôle of two of the peasants while the novice is asked to be the third. The veil is thus twice withdrawn from the daughter's face, and twice replaced without any suspicious revelations, but when the innocent third lover arrives he is greeted with the stream of stale beer full in the face. A suitable companion-piece to this decidedly disgusting trick is this incident related by Joest as occurring among the Bush negroes of Guayana: "As I was tending the wound of a young negress whose breast was badly cut, she wearied of the operation, and suddenly seizing it in both hands she sent a stream

of warm milk into my face and fled laughing away."[456]

The most harmless teasing is the obvious kind which forms the basis of much social play, such as games for a company like "Blind-Man's Buff," "Fox Chase," "Copenhagen," and similar diversions. A striking instance occurs in The Sorrows of Werther. During a violent storm Lotta attempts to cheer the frightened company; she places chairs in a circle and seats everybody in them—many acceding in the hope of being rewarded with a sweet forfeit or two, and getting their lips all ready. "We are going to play counting," said Lotta. "Now, attention! I am going round the circle from right to left, and you must count, each taking the number that comes to him; and we are going like lightning, and whoever hesitates or blunders gets a box on the ear, and we are going on to thousands." She then stretched out her arms and flew around the circle, faster and faster. If any one missed, bang! came a box on his ear, and in the laugh that followed, bang! came another, and always faster and faster. Werther, however, noticed with inward satisfaction that the two blows which he received were somewhat harder than Lotta gave the others. When the company is still less refined than this, joking sometimes becomes so rough as to lose its playful character. The ancient Thracians were celebrated for this sort of thing. Gutsmuth says truly that from this circumstance much could be inferred concerning the state of civilization among them, if we had no other sources of information. "A man stands on a round stone holding a sickle in his hand and having his head through a noose suspended from above. When he is not expecting it a bystander pushes the stone away and there hangs the poor wretch who has been chosen by lot for this fate. If he has not sufficient skill and presence of mind to cut the knot at once with the sickle he flounders there until he dies, amid the laughter of the spectators."[457]

Turning now to other forms of teasing than direct bodily annoyance, we find again that children very early understand it. When the pretence is made of great alarm at his beating with a spoon or banging a book or at a sudden cry, a child as young as two years old shows great delight, and will repeat the performance with a roguish expression. From this time on, to cause sudden fright is a favourite method of gratifying the taste for teasing. The ghostly manifestations which terrify each generation in turn can often be traced to some mischievous urchins.

I remember a joke played on a geographical professor at the gymnasium who, as he carelessly opened a closet door, was confronted by a skeleton which had been used in the previous lecture. Students could hardly subsist without the ancient trick of stuffing the clothes of a "suicide," and placing the figure on the floor of their victim's room with a pistol lying near, or hanging it by a rope to the

window frame, to give the late home-comer a genuine scare. In Athenäus we find a beautiful instance of readiness to meet such a trick. King Lysimachus, who took delight in teasing his guests, one day at a banquet threw a skilfully made artificial scorpion on to the dress of one Bithys, who recoiled; but, quickly recovering himself, said to the rather penurious king: "My lord, it is now my turn to frighten you; I beseech you give me a talent."[458] Such sport with fear, though harmless in these instances, becomes a passion with all narrowminded, tyrannous natures, and leads to cruelty which is anything but playful. Slatin's dramatic work, Fire and Sword in the Soudan, gives an instance of such traits in the character of the Caliph Abdullah. Indeed, Abdullah had a part in, or rather was the occasion of, Slatin's first experience during the life of the Mahdi. Slatin was taken prisoner by the Mahdi's army before the gates of Khartoum. The morning after the city was taken, alarming rumours reached him; half incredulous, he looked out of his tent. "A mob had collected before the quarters of the Mahdi and his caliphs; it seemed to be getting into motion and making toward me, and I soon saw clearly that they were coming in the direction of my tent. I could now distinguish single persons. First walked the negro soldiers, one of whom, whose name was Shetta, carried a bloody burden on his head. Behind him howled the mob. The slaves entered my tent and stood glowering before me, and Shetta opened the roll of cloth and showed me—Gordon's head! I grew faint and dizzy at the sight, my breath stopped, and it was only by the greatest effort that I commanded myself sufficiently to gaze upon that pallid face." The Mahdi and his caliphs had ordered this hideous cruelty.[459]

A common and early developed form of teasing is the deception which imparts to the perpetrator a feeling of intellectual superiority. Children display this in their tender years principally by pretending that they are going to do forbidden or improper things, as revolt against authority. When the little girl observed by Pollock was twenty-three months old she often declined to kiss her father good-night. She turned from him as if annoyed or indifferent, to make a *fausse sortie*, and then called him back and gave the kiss.[460] Sigismund's boy often exhibited a "kind of humorous defiance of authority," such as grasping at a light standing near him, but not so that it could burn him, and looking slyly at his father.[461]

Older children have innumerable tricks of this kind. A sort of game is to strike on a table with a spoon or on the floor with a card and repeat the formula "He can do little who can't do this, this," and pass the stick or spoon to the next neighbour with the left hand. The uninitiated who attempt to do this usually pass it with the right hand and are much puzzled when told that they are wrong. There

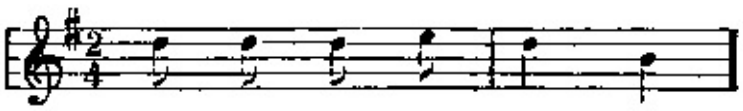
is much of this element, too, in the games of magic which children are so fond of. For examples of it among adults it is only necessary to turn again to the old jokes of students. In a university town a merchant, Karl Klingel, was roused in the middle of the night by a ring at the bell. The visitor was a student named Karl, who pretended to think that the name on the sign was a signal for him. “Mystification,” says Goethe in Wahrheit und Dichtung, “is and ever will be amusement for idle people who are more or less intelligent. Indolent mischievousness, selfish enjoyment of doing some damage is a resource to those who are without occupation or any wholesome external interests. No age is entirely free from such proclivities.” Moreover, one whole day in every year is given over to this jesting deception. The civilized world over the first of April is fool’s day. Wagner thinks that this custom arose from the change of the new year from the vernal equinox to January 1st, thus giving to the customary exchange of New Year’s gifts the character of jests, and to those who should forget the change of time the appearance of fools. So they are called Aprilnarren, poisson d’Avril, April fools, and in Scotland gowks.[462]

Memory forms another important division of our subject. The child’s natural impulse is easily aroused by new and striking peculiarities—for instance, he soon learns by example to stammer, to talk through his nose, or imitate any other defect without at first intending to tease. When his mimicry is laughed at he attempts intentional caricature, yet we are not to suppose from this that he would never do so alone. As a rule, though, it is the amusement of adults which stimulates him to improve on his former efforts. And as soon as he perceives that his victim is annoyed his mimicry becomes teasing.[463] At school this sort of teasing attacks unmercifully any little weakness or peculiarity, such as a halting or limping gait, stammering or lisping speech, a strange accent or foreign pronunciation. All these become the objects of ridiculous exaggeration even in the presence of older persons if they show no signs of disapproval.[464] In our club in the high school there was a boy who ran his words together in a comical fashion, and from imitating his manner of speech we constructed a formal language, some words of which still survive in the memories of his contemporaries. The most important sphere of this sort of imitation is that of pictorial art, where the caricaturist seeks to amuse by his exaggerated representations of familiar peculiarities. Children attempt this too. Their efforts are at first, of course, the grossest deformities with projecting ears, huge noses, etc., which they label with the name of some comrade whom they wish to annoy, but later when they have learned to draw they achieve some creditable caricaturing. I well remember our portrait of a French teacher who had two deep

lines from the base of his nose to the corners of his mouth, forming with his long nose the letter M. Such pictures are, of course, not to be classed with methods of teasing unless the intention is to show them to the subject, which is by no means always the case, and unless their *raison d'être* is something less than serious malice or hatred. There is always a charm in wielding, under the safe refuge of anonymity, these effective weapons against the mighty of the earth. What has not the nose of Napoleon III, for instance, suffered in this way!

Political caricatures were known to the early Egyptians;[465] and in Venezuela, besides pre-Columbian figures, a statuette with a gigantic nose has been found which is supposed to represent the Spanish invader.[466] Indirect satire forms a poetic analogue to these creations of the pictorial art, as it is an ironical form of teasing which imitates in an exaggerated manner, and makes the most of awkwardness and weakness, to raise a laugh against their possessor. Here play and earnest are frequently mingled, the poet usually setting out with the serious intention of annoying his victim, and yet taking such pleasure in the effort that the attack becomes genuine play. Indeed, we may say that the happiest and most effective satires are usually those which reveal such playfulness. The *epistolæ obscurorum virorum* afford brilliant examples as well as many passages in Rabelais's immortal work.

Finally, we must note the kind of teasing which is implied in provocative words and actions. Children often have the desire to use insulting and abusive language to their elders, but, not quite daring to utter it, they assume an impertinent air which sometimes seems partly playful. Thus Compayré tells of a child who said to his mother, "Vilaine!" but added immediately, "poupée vilaine"; and Marie G —— in her third year said to her father, "Papa, you are a—stove, you are a—tray," while the expression of her face plainly showed that she had a more offensive epithet in mind.

There can be no doubt that the fighting instinct often finds expression in the direct effort to excite others to anger by provoking words. Such taunts are frequently thrown into rhythmical form, and so constitute a primitive lyric in which the musical element is not wanting. This is especially the case when there are several participants, who chant them in a sort of recitative, and usually adopt, as far as my observation goes, that fundamental stereotyped measure which forms the basis of all[467] primitive German child-song, and which in its simplest form is this:

In this measure the street urchins call mockingly after a teamster:

"'S hängt eener hinde dran,
'S hängt eener hinde dran,"

or when they wittily compare a tipsy man with an over-loaded and toppling wagon:

"Er hot, er hot,
Er hot zu scheppe gelade,"

or taunt a young Englishman with

"Beefsteak, Wasserweck
Auf dem Kopf e grosse Schneck?"

or scoff at a tale-bearing comrade:

"Angeber, geb mich an
Kriegst 'n hohle Backezahn."

This same motive is always used for such songs now as it was in the days of our pagan forefathers, who doubtless gave it a wider application.

Grosse points out that the derisive songs of savages have a strong similarity to such childish taunts. He cites one which Grey heard Australians sing in scorn of one of their own number:

"Oh, what a leg he has!
Oh, what a leg he has!
The old kangaroo jumper"—

and compares it to a scene before the door of a school in Berlin where a troop of children followed a little lame girl, calling out:

"Aetsch, ätsch, ätsch,
Anna has a crooked leg,
Aetsch, ätsch, ätsch."[468]

Scornful speech among the common people is more than teasing. I must confine myself to only one or two examples of this important group. The above will suffice as an instance of the common jeering at physical infirmity.

Banter between the sexes begins even in childhood. In

Alsace the little girls sing a rhyme which recalls the English

"Girls are made of sugar and spice
And all that's nice;
Boys are made of rats and snails
And puppy dogs' tails."

"Räge, Räge, Tropfe!
D'Buäwe muess mä klopfe,
D'Maidle kummen in Hommelbett,
D'Buäwe kummen in Knotensäck!"

While in Bohemia the boys have it—

"Zeisig, Zeisig,
Die Buben sind fleissig.
Stieglitz, Stieglitz,
Die Mädeln sind gar nichts nütz."[469]

"Boys are the busy ones,
Goldfinch, goldfinch.
Girls are no use at all."

At the festivals, and especially the weddings of mountain folk, the youths and maidens carry on a veritable poetic warfare, which sometimes becomes pretty severe.

Ten different German tribes too had champions who sang in scornful contests like that of the two Greenland poets.[470] In trade rivalry the tailor suffers most. Religious differences have given rise to such jargon as this:

"Franz Willwanz
Willwippke Kadanz,
Willwippke Kadippke
Katholischer Franz!"[471]

As it is not expedient to dwell on the higher forms of satire here,[472] I will close this section with some remarks on the provocative manner and bearing. Like all other teasing, a scornful manner results from a feeling of superiority, and is always calculated to depreciate its object. When serious, such scornful behaviour constitutes a challenge to actual combat, but when playful it becomes the sort of teasing in which the perpetrator enjoys annoying others. The gesture which naturally accompanies it is pointing with the finger, and children usually add laughter. Even dogs understand this laughter, as their half-angry, half-depressed demeanour well proves. Sticking out the tongue, which with some children only means awkwardness and embarrassment, is sometimes employed in the same way. Sittl thinks that it was unknown to the Greeks and early Romans[473] (?); yet

the Gauls made use of it as a means of expressing contempt, as did also the Jews. I have been unable to find a satisfactory explanation of this or for the "turned-up nose." In Romeo and Juliet this passage occurs: "I will bite my thumb at them, which is a disgrace to them if they bear it"; and Persius refers to the same thing as expressing scornful depreciation of one's opponent. Italians and Greeks place the thumb nail on the front teeth and snap it forward with like intent.[474] *Minimo digito provocare*, which may be freely interpreted as "I can manage you with my little finger," serves the same purpose as does snapping the fingers also. Tylor remarks that in the language of deaf-mutes the rubbing together or snapping of small objects signifies contempt, depreciation, etc.[475] Many scornful gestures are obscene in character, and some such have been perpetuated in plastic art, especially during the middle ages (as, for instance, on the door of the Schwäbisch Hall). They all no doubt originated in the desire to express contempt in a forcible manner,[476] though the appropriateness of some of them is not apparent, as, for instance, jeering challenges to some degrading act, direct accusations, symbolic threats of defilement, where the idea seems to be that the assailant wishes to prove himself not only fearless in the presence of his foe, but shameless as well.

While on one side teasing is an expression of the fighting impulse, on the other it seems to be of considerable value as a promoter of sociability. The educational quality of school comradeships and students' clubs depends in no small degree on the hardening of the super-sensitive by teasing, and thus preparing them for the future buffetings of fortune. It is useful, too, in stirring up heavy and phlegmatic natures. Bastian writes from Siam: "When a boy misses his aim and stands like a whipped poodle, his comrades mock him with 'Kui, kui,' which is very provoking. Some poor fellows are so sensitive to this blame and jeering, and so emulous of praise that they are quite beside themselves, and beat their heads against a wall. They are then said to be 'Ba-Jo,' or mad from shame. When, on the contrary, they meet such scorn with indifference, they are regarded as fearless."[477]

7. *Enjoyment of the Comic*

There are two theories of the comic—that of the feeling of superiority and that of contradiction; the one being more subject to the will and the other to reasoning processes. That which Hobbes sets forth and which is perpetuated in modern psychology by Bain, Kirchmann, Neberhorst, and others, emphasizes the connection between laughter and ridicule. As the latter is a pleasure, "orta ex eo,

quod aliquid, quod contemnimus in re quam odimus ei inesse imaginamu" (Spinoza), so too our appreciation of the comic is derived from our own powers of exaggeration over and above the contradictions inherent in the object of our depreciation. Erdmann says that we never think of Christ's laughing, because we have an innate feeling that there is something malicious in unrestrained laughter.[478] The other theory, which also has many supporters, lays most stress on the intellectual side of the phenomenon, on the idea of contradiction, of inconsequence, of incongruity as displayed by the comic object. This startles us at first by its unexpectedness, and then appeals agreeably to our sense of the ridiculous. These two theories are by no means exclusive the one of the other, and are only opposed in that each accuses the other of failure to cover all the facts. Sully and Ribot[479] attempt to unite them by deriving the more refined sense of incongruity from the first exaggeration, progressively excluding the latter by mental play with contraries. We will be satisfied with the undeniable fact that pleasure derived from the comic is usually not only experimentation with attention, the shock of surprise, and a more or less logical enjoyment of the incongruities involved, but also an agreeable pharisaical feeling of being superior to the occasion. So far, then, as such pleasure can be referred at all to reason it does consist in this sense of superiority, and belongs in the category of fighting plays.

It is a familiar remark that we find something not altogether disagreeable in hearing of the misfortunes of even our best friends. From the standpoint of social science it is evident that humanity is not entirely dominated by the social and sympathetic instincts since even when these are most strongly manifested there is always a remnant of the fighting impulse in ambush, which greets with joy any damage to a friend as to a foe. This is the principle of competition. We know that untutored savages make violent demonstrations of joy over the misfortunes of an enemy, their fiendish laugh of triumph has been often described, and childhood recollections furnish most of us with striking data in the same line. "A ten-year-old boy who had daubed a comrade with filthy mud from the street danced around his victim and screamed with laughter."[480] Sometimes scornful and contemptuous laughter serves as a weapon, for it is not always a mere expression of feeling, being frequently used to infuriate an opponent much as a provoking manner is employed. We find, too, that in numerous cases it originates in a triumphant feeling, as when the teasing we have been considering is successful, and also when spectators applaud such success. Then, too, there is laughter at the artistic representation of such scenes, pictorial, plastic, and poetic. Yet we are far from exhausting the list. As a result of the struggle for life, every

inferiority calls forth a triumphant feeling in the observer, be it in physical or mental fitness or in opportunity or ability. Thence comes, too, the opposition among gregarious animals to anything which menaces the social norm or its usages, anything which is too small or too great to be reduced to the general average, provided the greatness is not sufficient to inspire awe or fear. And inferiority, too, in the courtship contest is often subject for ridicule. In all these cases, embracing as they do a large proportion of things comic, the instinct for fighting enjoys a triumph, and this enjoyment forms a large part of the general sense of satisfaction.

Yet we rightly hesitate to identify enjoyment of the comic with mere maliciousness. There is evidently something more. But what? Is Aristotle's explanation, that the misfortune to another which excites our mirth is really a harmless thing, sufficient? By no means. While this may be quite true considered subjectively, it does not bear on our special question. It is at this point, I think, that the other theory becomes applicable, especially in a connection which has not been sufficiently brought forward. In all the relations of the comic with which we have so far had to do, only a small part of the stimulus of contrast has come from the object itself and from the relief of tension. By far the most significant feature of the process is the fact that the observer alternates between æsthetic feeling or inner imitation and the external sense of triumph. Hereby alone does the comic win the right to a place in the sphere of æsthetics. It is a psychological law that sufficient observation of any object stirs the imitative impulse to such a degree as to cause us inwardly to sympathize with the object, and the law holds good with regard to what we consider inferior if it impresses us as amusing as well. Our feeling, then, is so far from being pure malice that we actually spend an interval in inward participation in the inferiority, though at the next moment, it is true, exulting triumphantly in our own superiority. All this is a play grounded on the instinctive indulgence of our fighting impulse, aided and enlarged by the idea of contrast, the two together constituting appreciation of the comic. Mere mischief is not æsthetic, and the mere idea of contrast does not necessarily produce laughter; but, then, synthesis does call forth this characteristic effect of the comic.[481] The mischievous factor is sometimes of much less importance, and the laugh not at all like ridicule, yet in the vast majority of cases the idea of resistance mingles, if for nothing else, then to overcome the shock which is apt to stagger us at first, but is finally conquered. I proceed now to adduce some instances to which, in spite of their diversity, this explanation is applicable. We have seen that surprise is one of the first causes for laughter in children. They thoroughly enjoy the moment of recognition of a

picture which has puzzled them, and adults have the same feeling when they have wrestled with almost illegible handwriting and at last decipher it. There is a slight shock of it, too, when we hear a child express precocious sentiments or see an animal act like a man. Then arises what Kries calls a state of false psychic disposition, from which we escape in the next instant. We may test this sensation by turning from a comic sheet to some serious reading. We are apt to conceive of the first sentences as if they were meant to be ironical, and find the recognition and correction of the misapprehension a pleasure in itself. Such a stimulus is also mildly operative in the amusement we derive from masquerades and other pretences. The charm of juggling and sleight-of-hand tricks is dependent on the unexpected performance of an apparently impossible task or the solution of an apparently insurmountable difficulty. As an instance of the surprise whose conquest forms a part of our amusement and which at first gives us a shock which has something of superstition in it, I will mention that which I felt on receiving “in the very nick of time,” as it were, the article of Hall and Allin’s, to which I have so often referred, just as I was about to begin my attempt to analyze the comic.

Punning, the introductory step to wit, is enjoyed by children too young to appreciate true wit. It consists in an incongruous association of ideas which at first amazes and then delights. Wit presents ideas in unexpected associations full of suggestion which prove either to be illusory or to conceal some jesting or serious meaning. Finally, we may include in his list some lying tales and extravagances which are too grotesque to represent any intention to deceive.

In all these instances we can trace the combination of fighting play with the contrast of ideas. The former, however, possesses here a deeper and more subjective significance, since it is no longer inspired by external inferiority, but by the necessity for overcoming the shock which at the first blush staggers and overwhelms us, but which it enables us to shake off immediately. We can thus speak of an offensive and a defensive triumph; in the former the laugh has something of the character of an attack, while in the latter we are warding off surprise. Yet the contrast of ideas coming in here makes it difficult to maintain this distinction clearly. Inner imitation falls in many cases into the background or entirely out of view, indicating that we are no longer dealing with æsthetic enjoyment. In the simpler cases contrast between stressed attention and its sudden unexpected release becomes the most prominent feature, while in others it is the contrast of opposing qualities which the object really possesses or has ascribed to it.

Summing up now the important data we find that enjoyment of the comic depends in the large majority of cases, though not in all, on the union of fighting play with the idea of contrast. This kind of fighting play naturally falls into two distinct groups, involving everything comic. The one is essentially composed of aggressive fighting plays, and makes prominent the contrast between inner imitation and the triumphant feeling of superiority. In the other group we find more defensive fighting play, and the idea of contrast takes the form primarily of sudden relaxation of the stressed attention and the impression of contradiction. That the first group represents an earlier stage of development from which the second is evolved, as Sully and Ribot intimate, is not easily proved. Children exhibit both very early.

Are there cases which do not exhibit fighting play in any form? I do not deny the possibility, though up to this time I have not been able to discover any such. The first difficulty to surmount in trying to establish this possibility would, it seems to me, be the laughter of children when they mimic anything (for example, the cries or movements of animals), which is not in itself amusing, nor is their intention mischievous. Can this be a case where the idea of contrast works alone and there is no fighting play? I think not, for I am convinced that the child's first impression of the comic depends on his æsthetic sympathy with the model and on his conscious shaking off of this feeling; and, furthermore, the idea of contrast is in this instance connected with the conquest of difficulty, an association which always indicates an approach to fighting play, and is especially significant in this case, since mimicry singles out the salient and individual characteristics of the model.[482]

8. *Hunting Play*

Having learned to recognise the three principal groups of fighting plays we turn now to a special application of the fighting instinct. The name "hunting play" will include, for the sake of brevity, playful pursuit, flight, and hiding.

The chase is, in connection with the collecting of fruits, the oldest and most primitive method of obtaining a food supply known to us. It is not impossible that in some more primitive stage than that of modern savages human beings subsisted entirely (with the exception of some insects, young birds, and eggs) on vegetable food, as monkeys do. But we have no definite knowledge of this, and, however it may be, the facts justify the deduction that the impulse to pursue a fleeing creature, or, on the other hand, to flee and hide from approaching danger, is as much an inborn instinct in man as in the lower animals. It is true, indeed,

that the arts of the chase are of vast service to evolution in other ways than in the pursuit of and escape from wild beasts, for it is often enough his fellow-man from whom the fugitive flees and must escape by speed or guile. In the case of animals the instinctiveness of the impulse is proved by their play. The kitten treats a ball of yarn exactly as an adult carnivorous animal does its prey, and that before she takes note of a living mouse; and young dogs show their wolfish nature in their chasing of one another when there is no real game to pursue. In the life of man, too, phenomena are not wanting which point to an instinctive basis for the hunting instinct, and they all belong to the sphere of play.

First, then, we must consider actual hunting of animals, which is not for the purpose of securing food. Small children display a disposition to chase animals. G. H. Schneider considers that this fact points directly to the inheritance of the habits of primitive man, but it is not necessary to call in the principle of inheritance of acquired characters, since simple succeeding to inborn instincts is sufficient to produce this result. “In the same way,” says Schneider, “the impulse for hunting, fishing, slaughtering animals and plundering birds’ nests in so cruel a manner is inherited, and is to-day quite common in young men accustomed to an outdoor life. The boy never eats the butterflies, beetles, flies, and other insects which he eagerly pursues and possibly dismembers, nor does he suck the eggs which he gets from nests in high trees, often at the risk of his life. But the sight of these creatures awakens in him a strong impulse to plunder, hunt, and kill, apparently because his savage ancestors obtained their food chiefly by such acts.”[483] Schneider goes too far, I think, in assuming that there is a special connection between the sight of a certain animal and the inherited impulse, yet it is quite probable that there is a general tendency to seek and pursue moving living creatures over and above what can be accounted for by fear. And perhaps the children of savages possess this tendency in a higher degree than do our own. Semon tells us of young Australians: “Any one who observes the children, and especially the boys, will see how in their play all the exercise is directed to the perfection of their skill in the chase. They are constantly occupied with throwing pieces of wood and little clubs at any possible target, killing squirrels and bringing down birds and small animals with these missiles. On the march, while the women and girls carry the baggage, the boys amuse themselves with various throwing plays.” The cylindrical nests of Australian birds are favourite hiding places of poisonous snakes, “and children who give promise of becoming zealous scientific investigators are often, as well as their elders, bitten in this way. My little friends in Coonambula were eager collectors of all sorts of insects and every creeping thing, and I have to thank them for many of my choicest

specimens."[484]

The chase as practised for sport by adults also argues for an instinctive basis of such play. Civilized man, who no longer makes hunting a direct means of replenishing his larder, still feels the force of this powerful impulse, and playfully reverts to the practices of his progenitors. The passion which this sport excites in its votaries is so strong as to leave little doubt that the impulse is an inherited one. "In our time," says Johann von Salisbury in the twelfth century, "the chase is regarded by the nobility as the most honourable of employments, and its pursuit the highest virtue. They consider it the summit of earthly bliss to excel in this exercise, and consequently they ride to the chase with greater pomp and pageantry than to war. From pursuing habitually this manner of life they lose their humanity to a great degree, and become almost as savage as the beasts they hunt. Peasants peacefully tending their flocks are torn from their well-tilled fields, their meadows, and pastures, in order that wild beasts may take possession."[485]

King Edward III had such a passion for hunting that he took a large pack of dogs with him when he was making war on France, and on French soil and every day he followed the chase in some form. The priestly Nimrods whose tastes belie their calling have been subjects of derision from the time of Chaucer to C. F. Meyer's Shots from the Chancel, and the opposite extreme is found in Sebastian Brant's Narrenschiff, where he accuses his contemporaries of disturbing the worship of God by bringing their dogs and falcons into the churches. In modern times the passion for hunting is strongest in mountaineers, whose free outdoor life affords every opportunity to indulge the taste. No one who has seen the face of an old mountaineer as he catches sight of a likely goat has any further doubt that inherited instinct is at the bottom of the hunting impulse. Bismarck well described the charm of field sports at the time (1878) when, his health being threatened, he left the business of his office to younger diplomats, and refused to be consulted except on the most vital questions. Rudolf Lindau has given, too, in a parliamentary speech of Bismarck a half-humorous and yet striking picture of a tired hunter: "When a man starts off on a hunt in the morning he is quite willing to tramp over miles of heavy ground to get a shot at birds. But after he has wandered about all day, has his game bag full, and is about ready to go home, being tired, hungry, and covered with mud, he shakes his head if the game-keeper says that there are partridges in the next field. 'I have enough,' he says. But if a messenger comes with the news that there is a wild boar in the woods below, this tired man with hunter's blood in his veins forgets his fatigue, and hastens to the woods, not satisfied until he has found the game and captured it."

The most rigidly conducted chase has something of the character of play, and there is a whole cycle of games in which flight and pursuit are the main features. To begin with the pursuit of our own kind: suppose one taking a two-year-old child in his arms and springing toward another person, who runs away in pretended fright. The child will manifest delight, which is much too strong to be attributed to mere pleasure in the movement, and must be connected with the hunting impulse. It is shown, too, quite as plainly by boys playing on the street. James is right when he says, "A boy can no more help running after another boy who runs provokingly near him than a kitten can help running after a rolling ball."[486] In 1894 I had an opportunity to observe a scene which displayed the power of this instinct in a manner which was almost terrible; the boys irresistibly reminded me of dogs or wolves pursuing their prey in a hot chase. At that time a racer came to Giessen, and to attract attention ran through the streets at midday attired in rose-coloured tights, fantastically decorated, and carrying a large bell in his hand. He moved with incredible rapidity, now disappearing round some corner, and now emerging from a side street. When school was out a crowd of homeward-bound boys filled the streets, and, catching sight of the runner, chased after him, so that soon a mob of from fifty to one hundred children were on his heels, chasing him like a pack of hounds with the wildest excitement and loud cries. The man carried a whip which he laid about him well, otherwise the children would doubtless have tried to catch and beat him.

The number of plays which employ such chasing is extraordinarily great, and I will confine myself to a few examples which display the characteristic points of difference. One of the simplest forms of it is the "Zeck," which is described in a seventeenth century collection. Another is the Greek ὀστρακίνδα, for which the boys used bits of pottery or a shell, one side of which was smeared with pitch and called night, while the other side was day. The children were divided into parties of the day and night, and the token thrown up in the air. The side lying uppermost on its fall determined which party should flee and which pursue. Whoever was caught was called a donkey[487] and must sit on the ground to await the end of the game. This may have been the origin of our coin tossing. In most chasing plays there are special pre-arranged conditions which avert danger from the fugitive and facilitate bringing the play to a close, and most of these conditions can be traced to some ancient superstition. In one game the pursued is safe while standing on or touching iron, and in another sudden stooping makes him immune, while others again appoint bases as cities of refuge. These were used by the Greeks, and a great variety of designation indicates how general they are among the Germans. In the Greek σχοινοφιλίνδα the participants formed in a

circle, around which one went with a stick which he secretly hid behind one of the players, who has the privilege of chasing the depositor; or, in case he fails to discover in time what an honour has been conferred upon him, he must run around the circle exposed to the blows of all its numbers.[488] It is like our “Drop the Handkerchief,” and also the game where the boy, whose cap the ball falls in, must throw it after the others. Finally, I will mention two games in which this element has developed into complex imitation of genuine combat. “Fox chasing” furnishes a perfect picture of battle. Two hostile parties stand opposed and attempt to conquer one another and to free their imprisoned allies, and yet, since each capture is made by pursuit and not by fighting, the principle of the chase is the controlling one. “Hare and Hounds” is another imitation of the chase. Adults usually play it on horseback, though there is a notice in Ueber Land und Meer (1880, No. 27) of such a chase on foot, in America. Two specially good runners are given fifteen minutes’ start, and the rest of the company take the part of hounds.

But it is not essential that the thing pursued shall be a living creature. Just as kittens and puppies chase lifeless objects, such as rolling balls, sticks, etc., so do human beings also find substitutes for the proper objects of their sportiveness. Catching a swiftly moving ball is sometimes of this nature; there is attending it a feeling of triumphant mastery much the same as that which excites the boy who seizes and holds a fleeing comrade or the clown who obstructs the course of a scorching wheelman. This is especially the case with professional ball players, who allow the ball to pass their hands and then seize it by a quick movement as it is about to touch the ground. There are other games in which the ball is not caught in the air, but is allowed to fall to the ground and roll away while the players must pursue and catch it. Football and cricket are examples of this, and consequently can be classed either with chase or fighting plays, though they have more of the characteristics of the latter. Another form of hunting play which should not be overlooked is the seeking for hidden persons or things. H. Lemming refers to a process belonging to the child’s first quarter as a kind of hiding play. “The child’s aunt had him on her lap, his little head resting on her right shoulder, while she played hide with him. ‘Where is he?’ she would cry while she hid his head between her arm and breast; then, as she suddenly drew the arm away, ‘There he is.’ She had not done it many times before the little fellow understood perfectly. As soon as his aunt made the motion he turned his head in the right direction and laughed softly. Several days passed, and the game had been repeated two or three times, when one morning early, as he was lying on my bed, I smiled at him and he laughed back; then his face took on a roguish

expression, and he buried his head in the pillow for an instant and suddenly raised it with the same mischievous look. He repeated this several times."[489] Becq de Fouquières restores a beautiful antique picture of a Greek hiding play. One little fellow presses his eyes shut while two others hurry to hide themselves. In Siam "Hide-and-Seek" is called "Looking for the Axe," and is oftenest played in the twilight because dark, impenetrable corners are more abundant then.[490] There is added weirdness, too, in the half light, and the shock of surprise on suddenly coming upon the hidden object is stronger, bringing the players more in touch with the emotional life. The objects to be hidden are of various kinds. This is a use to which children love to put Easter eggs, and much interest is added to the search by the cries of "Cold," "Freezing," "Getting warm," "Hot, hot, burning," etc. Very common, too, are games like "Button, button, who's got the button?" where a small object is passed from hand to hand and kept concealed. A curious forfeit game like this was very popular in former years, and is thus described by Amaranthes: "The whole company sit close together in a circle on the ground while a shoe belonging to one of them is slipped along and hidden beneath their legs, while one person tries to find it."[491] Fleeing and hiding occur in all hunting plays, but are specially prominent in some forms—in games like "Going to Jerusalem," for instance, where many attempt to make use of the same chair, "Stagecoach," "Change Kitchen Furniture," "Cats and Mice," etc. In many the pursuers are restricted by certain conditions and prohibitions which are in favour of the fleeing ones, and furnish occasion for evasions and all sorts of byplay. For one thing the "catcher" may be hooded or blindfold. Bastian saw a game played in Siam in which the bandage over his eyes was so arranged that it hung down like an elephant's trunk.[492] Another handicap is to require the pursuer to hop on one foot and hit those whom he overtakes with his knotted handkerchief. When in his excitement he changes to the other foot they all cry out and beat him with theirs. The Greek ἀσκωλιασμός was apparently much like this.

9. *Witnessing Fights and Fighting Plays. The Tragic*

Æsthetic observation belongs more properly to imitative play, but we have been compelled to notice it already in several connections and must not overlook its influence on fighting play. Thanks to inner imitation we can take part in fights without objective participation, and actually enjoy attacks and defence, strategy and risk, victory and defeat as if they were our veritable experience. As we found in games of rivalry, this internal sympathetic fighting has a great advantage over objective fighting in the more varied and lasting excitement

which it effects (for example, the tension of expectation which in one's own quarrels soon vanishes); yet, on the other hand, it lacks the element of pleasure peculiarly associated with one's own achievements.

In considering the observation of actual fighting we must distinguish between combat with an enemy and the conquest of difficulty. Inner imitation is prominent in both. When we see a company of labourers trying to lift a heavy stone or beam with pulleys, or driving piles in the water, or a man pulling his boat up on the beach, or a smith beating the hot iron with heavy blows of his hammer, or a hunter scaling mountain crags to reach an eagle's nest, we take part in the struggle with difficulty and enjoy success as if it were our own. The sympathetic interest is even greater in witnessing a fight between two combatants; indeed, it can be playful only when the onlooker can restrain his emotions and regard the struggle going on before him as a theatrical representation, as is often enough the case. When two boys are tussling, when adults quarrel with high words, when a rider attempts to control his vicious horse, when a man defends himself with a stick against a brutal dog, when the champions of opposing parties fight in the presence of their backers, the spectators may take such impersonal interest in the combat.

Much more to our purpose, however, is the witnessing of playful fights where the contestants engage merely for amusement or to test their prowess, whether or not they are in playful mood. In this case, overcoming difficulties is the leading feature. Then, too, there are myriad forms of juggling, contortionism, prestidigitating, etc., in which the spectator, at least in part, inwardly joins; and the wild excitement of animal and ring fights, bull baiting, fencing matches, racing on foot, wheel, and horse. Even for the fighting plays which are not intended as an exhibition, such as football and cricket games, there is usually collected a crowd of intensely sympathetic spectators, and the players themselves, when not in action, are entirely out of the game, yet they still take part through inner imitation which has frequent outward manifestations. Moreover, whoever sees a difficult piece of work accomplished feels a desire to test his own skill with a like task. The merest onlooker at a prize fight will assume belligerent postures, as Defregger says, and savages are often so wrought upon by witnessing a war dance that serious brawls ensue.

These facts lead us insensibly to the realm of art, of which I merely remark in passing that certain echoes of the fray may be detected in architecture and music, and that the representative arts and especially painting devote a wide field to combat, but that the real domain of internal fighting play is found in poetry.

Fighting and love plays[493] contribute most largely to the enjoyable element in poetry, and the latter is less effective when divorced from combat. Even in lyrics, which would seem to afford the least opportunity for exploiting such themes, the tourney is a fruitful inspiration, and the triumphant note of victory is conspicuous. A verse of Heyse's illustrates in mocking wise, and perhaps more forcibly than any other, how great is the importance to the poetic art of its connection with the fighting instinct. In dilating upon the literary status of the abode of bliss he says:

"Für Drame, Lustspiel und Novelle
Ist leider hier Kein günst'ner Boden;
Die kultivirt man in der Hölle.
Hir giebt es Hymnen nur und Oden."

"For drama, stage play, and novel
There is, alas! no public here;
These things are practised down in hell.
Here hymns and odes are *de rigueur*."

In studying epic poetry we are struck by the frequency with which the excitement of fighting furnishes the motive. This is the case with almost the whole cycle of primitive epics and folk stories, down to our modern romance; and when an epic is produced, like the Messias, for example, without such stimulus to interest, it falls irretrievably under the reproach of dulness. In the drama war is all-important. A short time ago an unnamed author published an article on dramatic conflict to which I fully subscribe.[494] Since the time of Aristotle the idea of acting has been prominent[495] in any conception of the drama, though there have been some writers like Lenz, Otto Ludwig, and lately Gartelmann, who have stressed the delineation of character. Both theories easily lead to a one-sided view. "Not character as such, but character in conflict it is which lays claim to our interest in the drama, and only such acting is dramatic as reveals the conflict.... The essence of the dramatic consists in the presence of an overwhelming catastrophe which forms the central point of the poem, and its culmination is the writer's chief task." It strikes me that this is incontestable, though it may be urged that the conflict is only a means of bringing out the essential features of the character. Thus Wetz strikingly says: "If a poet wishes to portray his hero realistically, then must his environment contrast with his character. He must be put in trying circumstances, and thus be brought out of himself and reveal his utmost depths. Comedy as well as tragedy furnishes such situations; where the amusing complications or fatal passion have once been intimated they must be pursued to their final consequences."[496] For refined

connoisseurs it may be true that in perfect drama[497] conflict is but a means of unveiling character, yet even their interest is deepened by psychological considerations. With naïve spectators, who are to me the more important, it is quite otherwise. The conflict itself is the important thing to them, and the fact that it may afford insight into character is only noteworthy as making the fight more interesting. In any case we are safe in averring that the pleasure afforded by the drama has one very essential feature in common with ring contests, animal fights, races, etc.—namely, that of observing a struggle in which we may inwardly participate.

Tragedy is the highest poetic representation of a contest which is pursued to the bitter end, usually violent defeat.[498] Here we again encounter the question of enjoyment in relation to what is tragic. Volkelt explains it as a result of (1) the exalted character of the excitement; (2) sympathy; (3) strong stimuli; and (4) appreciation of artistic form. The third point, which is also one of ours, he considers subordinate. His first point, however, is not universally applicable, and his second is limited to those cases in which the sufferer is regarded as worthy, and even then pain predominates and only serves to weigh the balance further down on that side. Thus only the last two points remain for universal application. While we grant that appreciation of artistic form is an element in the explanation, the third point, pleasure in intense stimuli, seems to me more important. Volkelt's view is not a little influenced by Vischu's contention that "a general disturbance of the emotions constitutes a satisfaction for barbaric crudeness and *ennui*." We have already had occasion to show that the enjoyment of strong stimuli is of great significance in all departments of play, but I fail to see anything barbaric about it, and consider this word unworthy to be applied to æsthetic pleasure. Is it not a noble pleasure to stand on a mountain summit or a ship's prow and watch an approaching storm? And how much more elevated still is the storm of effects which tragedy awakens in us!

In considering fighting play in this connection we must notice a further point which is a corollary to those which have gone before, and is illustrated by some of the examples already given. The man standing on a ship and contemplating the force of a storm (I do not refer to his struggle with it) enjoys more than mere excitement. His soul partakes of the raging of the elements, the seething waves which break on the vessel's prow, the furious gusts of wind, all this outward strife is inwardly imitated by him, and he is filled with jubilant delight in exercising all his fighting instincts. So also with tragedy. Not only joy in the storm of emotions, but also joy in the contest, is an important means of subduing what is unavoidably painful. While this relation, too, has been appreciated in

other spheres, its application to the tragic has not hitherto been made. Indeed, this instinct is usually referred to in a narrow sense as a sort of bloodthirstiness, an idea not always far wrong. Ribot has formulated the following progression: “Pleasure in manslaughter, pleasure in judicial execution, pleasure in witnessing death (murder, gladiatorial combat, and the like), pleasure in seeing the blood of animals gush out (bull and cock fights), pleasure in witnessing violent and gory melodrama [this is only imitation, since the illusion of reality is but momentary], and finally, pleasure in reading bloody romances and following imaginary murder trials.”[499] We can hardly deny that even the cultured spectator feels something of the murderous impulse when, for instance, Hamlet springs with the agility of a tiger toward the king to fix him with a dagger. Yet as a whole this exposition of the theory of tragedy is defective even if we make the murderous impulse cover every variety of injurious conduct. The impulse to inflict injury has nothing to do with the final overthrow of the hero of our sympathies (and we do sympathize often with the very criminals in tragedy), and in the instances cited by Ribot it is usually less the bloodiness of the episode than its character as a fight which attracts us. The feeling of power in combat, not the cruelty of destructiveness, is most prominent. The reason that spectators of an animal fight are not satisfied until one of the fighters is either killed or disabled is surely not because they delight in injury as such, but because the fight can not be decisive until some injury is done.

While, then, we can not adopt this theory of the destructive impulse, yet we can learn from it, especially on one point to which we have given too little attention. We do take a certain pleasure in the catastrophe involving the personages of a drama which differs from our satisfaction in a fighting play; we sympathize with the sufferer, and yet experience feelings of pleasure. So long as the crisis delays, the case is indistinguishable from all other fighting plays; but how can we take part by inner imitation in the general collapse and yet enjoy the spectacle? In answer to this I must say that I am extremely doubtful whether the moment of the catastrophe is always enjoyable; I am inclined to think that quite often the sources of pleasure are insufficient to outweigh genuine grief. In this case inner imitation persists because the spectator is hypnotized by the extraordinary tension, and is unable to desist. I think, for example, that no one experiences lively feelings of delight while Wallenstein is being murdered behind the scenes, in spite of the intense stimulus, importance of the interests involved, etc. It is not essential that every instant of æsthetic contemplation should be filled with unadulterated pleasure. On the other hand, there are undoubtedly instances in which the catastrophe is actually enjoyed; and since we are not prepared to

accept the explanation of this given above, let us inquire whether we can find one more satisfactory from the standpoint which we have adopted—namely, that of fighting play strictly speaking. An example will make my view clear, and one which may be explained in two ways. Let us picture to ourselves a Roman amphitheatre with the spectators assembled to witness a fight between a "bestarius" and a lion, and suppose that the man, in spite of wonderful agility, receives more and more serious wounds and is finally slain by the maddened brute. Suppose, further, that inner imitation on the part of the spectators is engaged by the man, as is natural, so that their pleasure can not be referred to triumph in the lion's victory. To us the most conspicuous feature of the whole thing is the cruelty and bloodthirstiness of the spectators, and reading modern descriptions of these old Roman customs only strengthens this idea. The barbarity was undoubtedly there, but was it the ground of their enjoyment? I think not, for thousands of the breathless spectators. On the contrary, that which moves these people is one of the strongest and most stirring stimuli known to us, sympathy with the courage and persistence of fighters to the death. For the best and probably the most of the spectators the satisfaction is not in mere witnessing cruel horrors, but first in the invincible courage which is undaunted in their presence, or in case of the hero's defeat it consists in a victory over their own sympathetic terror. How clearly this passage from Cicero indicates this! "When you see the boys in Sparta, the lads in Olympia, or barbarians in the arena suffer the severest blows and bear them silently, will you wail like a woman when you feel pain? Boxers never lament when they are beaten from the ring, and what wounds they get! Can you not put up with a single hurt from the buffetings of life? What fighter, even an ordinary one, ever sighs or groans or goes about with a downcast face? Which of them has tamely submitted to death?"

In a similar way the sight of misfortune in tragedy may give pleasure because the outward undoing of the hero is calculated to awaken in us a feeling of triumph in which imitation gives us a part. As I have said, I do not believe that this is always the case, but rather that while the tragedy as a whole gives pleasure the supreme moment may be painful; and in still other circumstances the storm of emotion, one of all-conquering Fate, etc., may cause feelings of satisfaction when there is no inner victory. It is never so intense, however, as when this is present—a proof of the importance of fighting play. The utmost triumph for a fighter is the victory over his fear of defeat, and such victory is afforded by our playful sympathy with a tragic incident. Then fighting play becomes a source of such pleasure as is attributed ordinarily to exalted influences. Such side lights on a subject are seldom without important significance, and our problem is now

thrown into somewhat this form. Tragedy most perfectly represents combat when it is pursued to a catastrophe. Since we habitually sympathize with the human element, the contradiction ensues of our experiencing pleasure in the suffering which we deplore and are involved in. We explain this apparent contradiction by assuming that the catastrophe becomes the foundation for an inner victory which converts it into a triumph. An examination of the various elevating effects which Volkelt's analysis discloses reveals much that is irrelevant from our standpoint. The most salient of these points is his tragic opposition, whereas we have found that the catastrophe is in itself enjoyable only when exultation in the triumph of desolation is based on dread of that very thing. When the exhilaration depends merely on the overwhelming nature of Fate or when a moment of respite is snatched for the doomed hero, the poignancy of our sympathy with the final suffering is softened. Independent satisfaction in the catastrophe is present only where there is an element of fighting play, and herein lies the essence of our theory—that is, when inner imitation transforms defeat into victory. "Courage and self-possession in the presence of a powerful enemy, of threatened danger or calamity, or of difficult and anxious questions—this is what the tragic artist displays. All that is martial in us holds saturnalia in the presence of tragedy."[500]

The study of fighting play has thus led us from its rough and cruel manifestations to the culminating point of tragedy. What Volkelt says in a general way of the supreme moment we may apply to our own position: "Even in suffering and grief, in fear and defeat, must the tragic personage, if he would not fall below the requirements of his art, always appear great. When a man quails in the hour of extreme suffering or wavers before the severest test, however superior he may have appeared previously, there is an end of tragic effect. But let him display greatness of soul at the crucial moment, he then makes an elevating impression which is subverting to pessimism and encouraging to the idea that the severest and most outrageous attacks of Fortune can not make a man small, that the human spirit bears within itself a principle of growth and of supremacy which is able to cope with the might of Fate itself."[501]

I close with the remark that this study of the tragic is advanced with a full sense of its inadequacy. My main intention is to indicate the scope of my conception of fighting play. The general idea of play has been developed by others and applied advantageously in the treatment of contrast of ideas in the tragic. Tragedy, like all other sources of higher æsthetic pleasure, extends beyond the sphere of play because, to put it briefly in the words of Schiller, we can descry through the veil of beauty the majestic form of truth.

II. Love Play

Is there such a thing as playful application of the sexual impulse? Views of this subject differ widely, and the remarks on it of animal observers show that many hesitate to use the term “play” in this connection. Wundt says: “The distinction has been made between fighting play and love play, and such actions and expressions as, for instance, the cooing of doves, the calls of singing birds, etc., have been interpreted as wooings. But these wooings are quite seriously intended by the bird, and I do not think that we can regard them as in any sense playful.”[502] On the other hand, others can be cited who assure us that most observers agree in ascribing to singing birds, besides their regular courtship arts of song and flight, actions which have all the marks by which Wundt himself characterizes play—namely, enjoyment, repetition, and pretence. However, we shall find that it is in man that play with the function in question is most clearly exhibited, and, as its connection with art has already been referred to, it will be sufficient to dwell on one aspect of it here—namely, its relation to poetry. However derogatory it may be considered to condition poetic art on such stimuli, the fact is incontestable that, deprived of their influence, the tree of poetry would be stripped of its verdant living dress.

On the other hand, we must avoid the older and more common error of speaking about the “sweet sportiveness of love” without distinguishing between what is really playful and what is quite seriously meant. It is true that such popular usages of speech have not become general without some foundation in fact, and it may prove interesting to inquire how this one arose. We find the element of truth in the popular feeling by comparing the subject under discussion with eating and drinking, which are also sensuous pleasures. Why do we not hear so much of play in their exercise? Evidently there is a difference. While in eating and drinking, so far as directed by hunger, the real end, the preservation of life, is always in view, while the real end of lovers’ dalliance, namely, the preservation of the species, is far in the background. It is true that we sometimes eat and drink for the enjoyment it gives, as well as to satisfy hunger and renew our strength, yet the practical bearing of the act is so closely and inseparably connected with it that only under very special circumstances can we speak of it as playful. It is quite otherwise with the caresses and the traffic of love. Here the practical results are so far removed and the things in themselves are so enjoyable that such language is quite justified.

Still, while there is analogy there is not perfect identity with play, and we must carefully inspect various aspects of the subject to select those which are

unmistakably of this character. The subjoined examples are therefore selected advisedly and with care, in view of possibly unexpected readers of this chapter. A glance over the field discloses the following suitable divisions: 1, Natural courtship play; 2, sex and art; 3, sex and the comic.

1. *Natural Courtship Play*

Birds have many familiar courtship arts which are hereditary (the isolated adult bird displays almost as much capacity in this direction as does one reared with his kind), but mammals exhibit much less of it. In relation to man there is a theory that sex grounds all art (of this we shall speak later), but a scientific system of comparative courtship of the various human races does not exist; nor, indeed, have we systematic observations of any one people. It is therefore impossible to affirm whether there are such things as instinctive gestures, expressions, caresses, etc., which all human beings recognise as sexual stimuli. From the little that is known it seems probable that the number of such tokens is not great—even the kiss is by no means general! We can only be sure of a universal tendency to approach and to touch one another, and of a disposition to self-exhibition and coquetry as probably instinctive and of the special forms which these tendencies take under the influence of imitation and tradition as secondary causes. Caressing contact may then be regarded as a play when it is an end in itself, which is possible under two conditions: First, when the pursuance of the instinctive movements to their legitimate end is prevented by incapacity or ignorance; and, second, when it is prevented by an act of will on the part of the participants. Children exhibit the first case, adults often enough the second.

It is generally known that children are frequently very early susceptible to sexual excitement, and show a desire for contact with others as well as enjoyment of it, without having the least suspicion of its meaning. Keller gives a beautiful and touching example of this in his Romeo und Julia auf dem Dorfe: “On a tiny plot of ground all covered with green herbs the little lass lay down upon her back, for she was tired, and began to croon some words in a monotonous way, while the boy sat near her and joined in the song, almost wishing to follow her example, so weary and languid he felt. The sun shone into the open mouth of the singing girl, gleaming on her teeth so dazzlingly white and shining through the full red lips. The boy noticed this, and taking her head in his hands he examined the little teeth curiously and cried, ‘Guess how many teeth you have?’ She reflected for a moment, as though making a careful calculation, and then said with conviction, ‘A hundred.’ ‘No; thirty-two,’ he answered; ‘but wait till I count again.’ Then he

counted aloud, but as he did not make thirty-two he had to begin over several times. The little girl kept still for some time, but as the zealous enumerator seemed never to get any nearer the end of his task she shook him off at last and cried, 'I will count yours.' So the boy stretched himself on the grass with the girl above him, throwing his head back while she counted 1, 2, 7, 5, 2; but the task was too hard for the little beauty, and the boy had to teach and correct her, so she too had to begin over and over again. This play seemed to please them better than any they had had that day. But at last the little girl slid down by the side of her small instructor, and the children slept together in the bright sunshine." From such tender, unconscious premonitions we pass to more strongly marked love plays, for which the services of a special instructor are usually necessary, as in the somewhat peculiar relation of the boy Rousseau to the little Goton who played the part of teacher in their private interviews: "Elle se permettait avec moi les plus grandes privautés, sans jamais m'en permettre aucune avec elle; elle me traitait exactement en enfant: ce qui me fait croire, ou qu'elle avait déjà cessé de l'être ou qu'au contraire elle l'était encore assez elle-même pour ne voir qu'un jeu dans le péril auquel elle s'exposait."

Often, too, children show the same sort of preference, all unconscious of its import, toward particular favourites among their grown-up friends, enjoying the pleasure of contact for its own sake. "The pretty girl," says Mantegazza, "whom Nature has endowed with the power to awaken longings and sighs at her every step, often does not realize that in the swarm of her admirers there are boys scarcely yet past their childhood, who secretly kiss any flower on which she may chance to look, who are happy if they may steal like a thief into the room where the beauty has slept and may kiss the carpet that her foot has pressed; ... and how seldom does she suspect, as her fingers play with the locks of the little fellow whose head rests on her knee, that his heart is beating audibly under her caressing touch!"[503] Perez cites Valle's account of a ten-year-old boy who was in love with his older cousin. "Elle vient quelquefois m'agacer le cou, me menacer les côtes de ses doigts longs. Elle rit, me caresse, m'embrasse; je la serre en me défendant et je l'ai mordue une fois. Elle m'a crié: Petit méchant! en me donnant une tape sur la joue un peu fort, etc."[504]

This feeling may be involved in some of the positions and movements of tussling boys. Schaeffer has remarked in a short paper that in the belligerent plays of boys, especially ring fighting,[505] "the fundamental impulse of sexual life for the utmost extensive and intensive contact, with a more or less clearly defined idea of conquest underlying it," plays a most conspicuous part. I do not

believe that this is the rule, yet I am convinced that Schaeffer's view is more often correct than would appear at a first glance, and especially so when the contestants are on the ground and laughingly struggle together.

Lastly, we must notice the absorbing friendships between children of the same sex. Here, too, the instinct, robbed of its proper aim, may assume a sportive, playful air. Even among students, friendships are not rare in which the unsatisfied impulse plays its part all unknown to the subjects. I content myself in this connection with the citation of a little-known passage of the highest poetic beauty, and evidently inspired by personal reminiscence. In it a light touch of sexuality is imparted with a delicacy equal to that of Keller. Wilhelm Meister writes to Natalie of his suddenly formed and tragically ended friendship with a village lad. The two boys, who had just become acquainted, were fishing together on the river bank. "As we sat there leaning together he seemed to grow tired, and called my attention to a flat rock which projected into the water from one side of the stream. It made the loveliest place to bathe. Pretty soon he sprang up, declaring that he could no longer withstand it, and before I knew it he was down there undressed and in the water. As he was a good swimmer he soon left the shallows, yielding his form to the water and coming toward me. I too began to be interested. Grasshoppers danced around me, ants swarmed about, bright-coloured insects hung from the boughs overhead, and gold gleaming sunbeams floated and glanced fantastically at my feet, and just then a huge crab pushed up between the roots to his old stand whence he had been driven by the necessity of hiding from the fishers. It was so warm and damp that one longed to get out of the sun into the shade, and then from the cool shade to the cooler water. So it was easy for my companion to lure me in with him. I found a mild invitation irresistible and, notwithstanding some fear of parental displeasure, and a vague terror of the unknown element, I was soon making active preparations. Quickly undressing on the rock I cautiously stepped into the water, but did not go far from the gently sloping bank. Here my friend let me linger, going off by himself in the buoyant waves. When he came back he stood upright to dry his body in the warm sunshine. I thought the glory of the sun was eclipsed by the noble manly figure which I had never seen nude before. He too seemed to regard me with equal attention. Though quickly dressed again, we now stood forever revealed to one another, and with the warmest kisses we swore eternal friendship."

I suppose the general playfulness of the foregoing instances might be called in question on the ground that there is no consciousness that it is all a play, no sham activity. Yet we refer complacently enough to other things which display quite as

little of such subconsciousness as play. Indeed, the rule is that it is absent from mental play, and, moreover, this is a case that more closely concerns the emotions. The plays which involve subjective sham activity overlap to a great extent the sphere of the objective ones where the man or animal takes pleasure in action which has no necessary actual aim, yet without being conscious of having turned aside from the life of cause and effect. If we admit that the boy careering aimlessly about is playing because he enjoys the movement for its own sake, or that gourmands who eat without hunger, and merely to tickle their palates, are playing, then we must also call it play when the child takes pleasure in the sexual sensations arising from touch stimuli without knowing that his activity, on account of the exclusion of their proper end, is all a sham. From a purely biological standpoint the conception of play goes much deeper, as we shall see later on. I have purposely selected such examples as (with the exception of the last citation) exhibit the sexual impulse in conjunction with other activity that is unmistakably playful, believing that this conjunction would strengthen the probability of its being playful in those cases which if given alone might appear doubtful.

With adults the subjective side of play is more prominent, especially when the proper end of the instinctive impulse for contact is held in abeyance by the will of the participants. Here belongs the dalliance of engaged couples. It is no play, of course, when the lovers, on the first revelation of their common feeling or after a long separation, indulge in a passionate embrace. But when in their daily intercourse that manifold trifling begins which is too familiar to need description, I see no reason why it should not be called play with touch stimuli. The more naïve the period or social class the more common this is. In the free intercourse of the sexes in mediæval baths the jesting caresses must often have been quite rough. While many of the pictorial representations of such bathing scenes are doubtless exaggerated, still they could not have been pure inventions. The description by the Florentine Poggio (1417) of Swiss bathing customs bears them out. He expressly says: “It is remarkable to see how innocent they are; how unsuspiciously men will look on while their wives are handled by strangers,... while they gambol and romp with each other and sometimes without other company; yet the husbands are not disturbed nor surprised at anything because they know that it is all done in an innocent, harmless way.” In feudal times it was the custom for noble gentlemen to be served in the bath by young women, to be washed by them, and afterward rubbed. At the spinning *fêtes* the young couples “played,” as a Christmas piece has it, with all sorts of hand clasping and stroking. But the most remarkable proceeding of this kind was the “lovers’ night

of continence," observed in various countries, including France, Italy, and Germany, by knightly devotees whose lady permitted them to pass one night at her side, trusting to their oath and honour not to take advantage of her kindness. This strange custom, so shocking to our ideas of propriety, was doubtless derived from similar practices of very ancient origin among the peasantry, the chastity of whose girls was rarely violated in spite of the utmost intimacies. It is interesting to find an ethnological analogue to this among the Zulus. According to Fritsch, the custom of *Uku-hlobonga* obtains there, "in which the young bachelors join the maidens of the neighbourhood, and these latter choose their mates, each according to her pleasure. The rejected swains have to bear the scorn of the whole company, while the chosen ones recline with their sweethearts, and an imitation of the sexual function is gone through with. Yet, as a rule, the girl by force and threats prevents anything more serious!"[506]

Self-exhibition will occupy us only so far as it does not relate to art. Every lover desires to present himself in the most favourable light to the object of his affections, and to this end he plays a part, to a certain extent; he “does as though” he were braver, stronger, more skilful, handsomer, of finer feeling, and more intelligence than he actually and habitually is. Fliegende Blatter said once, “A lover always tries to be as lovable as he can, and is therefore always ridiculous.” Such self-display is not necessarily playful, but it becomes so as soon as the lover’s vanity is involved, and he aims not only at the desired effect on his mistress, but also enjoys for its own sake the exploitation of his charms. Here, as in so many psychic phenomena, the complexity of the field is important. We are able to see ourselves over our own shoulders, and behind the wooing I stands a higher consciousness which looks on with satisfaction at the display of its own attractions. Hence arise the frequent cases where a sort of tacit understanding between a man and woman prohibits all serious intercourse, so that they can have only such relations as depend on the sexual stimulus (flirting).

As the first form of courtship by self-exhibition I mention those fighting plays in which the combatants engage in the ladies’ presence. I have noticed incidentally that human combat, as well as that between animals, is often connected with the sexual life, but now we will consider the subject from its proper standpoint. That a martial bearing is a means not only of terrifying enemies, but also of delighting females, all experience goes to show, and war paint and feathers become adornments as well. Here as with animals, says Colin A. Scott, the terrible approaches the beautiful, and as modesty in women has a peculiar charm to the other sex, so does a warlike spirit appeal to the feminine nature. “In some tribes a man dare not marry, and indeed no woman would have him, until he has slain a certain number of foes.”[507] The conquest of rivals then becomes a means of self-exhibition before the loved one. Westermarck, in his history of human marriage, gives numerous instances of such courtship contests, from which I shall borrow. Heame states that “it is a universal custom among the North American Indians for the men who are wooing a woman to fight for her, and naturally the strongest among them gets the prize. This practice prevails among all their tribes, and is the occasion of passionate rivalry among their youths, who from childhood, and on every possible occasion, make a point of displaying their strength and skill in fighting.” Lumholtz writes from North Queensland: “If a woman is beautiful all the men want her, and the strongest and most influential is usually the lucky man. Consequently, the younger men must wait a long time to get a wife, especially if they are not brave enough to risk a fight with one stronger than themselves. Among the West Victorian tribes described by Dawson a young

chief who can not find a wife for himself and is inclined to another man's, may, if the latter has more than two wives, challenge the husband to combat, and if victorious make the lady of his choice his lawful spouse. In New Zealand when a girl has two suitors of equal merit a contest is arranged in which the damsel is dragged by the arms in different directions by the wooers, and the stronger carries off the bride." Arthur Young tells of a strange custom which was at one time general in the Arran Islands. "A number of the poorer village folk confer together respecting some young girl who according to their opinion ought to be married, and select an eligible peasant. This settled, they send a message to the fair one that next Sunday she will be 'beritten gemacht'—that is, carried on the men's shoulders. She then prepares burned wine and cider for the feast, and after mass all pay her a visit to watch the sling contest. After she is 'beritten gemacht' the rivalry begins, and general attention is skilfully directed toward the chosen swain. If he is victor he surely marries the maiden; but if another overcomes him he loses her, for she is the prize of the champion."[508] There is surely something playful about such contests, at least in the preparation and in the awards, if not in the struggle itself. But it is not always by combat with other suitors that the lover displays his courage, strength, and dexterity. By boldly taking risks and engaging in tests of strength and trials of skill which have so strong an attraction for the young, he claims the attention and admiration which women bestow on such acts. I do not assert that such exhibitions would never take place without feminine spectators, but as a rule they would be pursued with much less enthusiasm if the only onlookers were to be men. Most herdsmen would be indifferent to the Edelweiss growing on the almost inaccessible rocks did not a sprig of it in their hats advertise them to the village beauties as men fearless of danger. We have seen that the adventurous knight's readiness for the fray and hearty welcome to danger in any form were usually prompted by his wish to lay the trophies of his victories at his lady's feet. Nowhere is this sort of courtship more naïvely expressed than in Walter Scott's Ivanhoe, where Richard Cœur de Lion sings beneath his lady's window:

"Joy to the fair! My name unknown,
Each deed and all its praise thine own;
Then, oh, unbar this churlish gate!
The night dew falls, the hour is late.
Inured to Syria's glowing breath,
I feel the north breeze chill as death;
Let grateful love quell maiden shame,
And grant him bliss who brings thee fame."

We should further note the display of physical charms so far as it can be separated from art, which, indeed, is no easy task, as the boundary line is

sometimes almost indistinguishable. Yet it does exist, and we may be able to detect it most readily in the conduct of our budding youths. As a rule, when the other sex begins to interest them they are impelled to make the most of every outward advantage. The boy begins to be neat, to care for his teeth and nails, arrange his hair more carefully, to consider the fit of his clothes, and to indulge in boots and gloves which are too small for him; he puts on high collars and makes a great display of his cuffs, and impatiently awaits the premonitions of a mustache. It is altogether unlikely that he is clear as to the meaning of all this, and in that case he is playing with his personal charms. Such special attention is given to the hair by youths of all classes as to suggest a particular significance for that form of adornment, and the care of the beard naturally goes with it.

There are, however, less innocent modes of self-exhibition and some which more unmistakably point to the end which they are intended to serve. The girdle decorations of savages, for instance, are now considered to have a significance quite different from that formerly attributed to them. Their original intention was in all probability to attract attention, not to conceal. Of their ornamental use we are not now speaking, but I confess that I have my doubts of the universal applicability of the explanation just indicated, in spite of the opinion of many competent investigators. Forster speaks of the leaves of a certain species of ginger plant which the male inhabitants of some of the New Hebrides bind to their breech cloths, as outraging in their appearance every law of decency, and Barrow makes the same remark about the Hottentots.[509] Many scholars, too, are disposed to attribute the origin of circumcision to some such beginnings, as there is much against its explanation on religious or sanitary grounds. It is rather surprising that no one has adduced, in support of the modern view of the purposes of courtship served by the articles suspended from the girdle, the strange fashion of projecting front flaps introduced in the fifteenth century. Rabelais's famous chapter on this subject is merely an exaggeration, not an invention. The reality was certainly bad enough,[510] and as little calculated as are the savage decorations to serve the purposes of modesty. Yet in neither case am I prepared to assert that they belong exclusively to the category of sexual stimuli.

The higher the culture of a people the more prominent becomes the display of mental qualities in conjunction with physical advantages. We have seen that the opportunity to speak in public is often the leading stimulus in the mental fighting play of argument, and in the intercourse of the sexes the decorous display of one's intellectual advantages appears as a further play, be it whether the man simply wishes to show his powers to their best advantage in the presence of beautiful women, or whether he intends his gallantry as a direct attack on the

feminine heart. Every one knows how common this is as a mere play, apart from any serious intention, and, indeed, that it is the habit of man to play the gallant even when he is not especially “laying himself out” to be attractive. The much-decried unseemly haste of men in society to seek refuge in the smoking room after dinner is due certainly in part to their fatigue after keeping up the play so long and trying to appear superior to their ordinary selves.

But earnest courtship, too, easily assumes a playful character, because the pleasure in self-exhibition and the satisfaction of vanity easily become ends in themselves. The stilted and flowery epistolary style common a few generations ago doubtless grew up in this way, and the old letters published as models for lovers are good instances of this sort of extravagance.

Coquetry in the other sex is allied to self-exhibition in the male, but it is of so complicated a character that a special section is devoted to its treatment. Usually the word conveys the idea of a heartless use and enjoyment of a woman’s power over men, but it really has a much wider meaning which is of great biological importance.

Not only among human beings, but in the animal world as well, peculiar behaviour is noticeable on the part of females, which is based on the antagonism of two instincts—namely, the sexual impulse and inborn coyness. Hence arises that alternate seeking and fleeing for which I know no better name than coquetry, which is thus seen to be often quite different from mere heartless play. A simple illustration is that of the doe followed by an ardent buck; she flees, but it is always in a circle.

If we find the cause of such coquetry in inborn modesty which is directly opposed to the sexual impulse the question is at once asked, Of what use is this modesty? The answer which is attempted in The Play of Animals involves an essential modification of the theory of natural selection. Darwin has referred animal arts of courtship to æsthetic taste on the part of the female, who is said always to choose the handsomest and best equipped of her wooers. But it is by no means certain that such choice from a number is always the case; indeed, some observers directly contradict the theory of courtship arts at all. The Müller brothers have definitely established the fact that birds pair long before the breeding season, so that such arts can only be for the purpose of “overcoming feminine reluctance to sexual union.” And H. E. Ziegler remarks, in a notice of my book, that courtship plays are indulged in repeatedly by monogamous birds long after their permanent choice has been made. With these facts then as premises, I have reached the following conclusion: Since the sex impulse must

necessarily have extraordinary strength, the interests of the preservation of species are best served by a long preliminary condition of excitement and by some checks to its discharge. The instinctive coyness of the female serves this purpose. The question is not, in my opinion, which of many males she will choose, but rather which male possesses the qualities necessary for overcoming the reluctance of the female whom he selects and besieges, and for maintaining at the same time the proper state of excitation. “The female is not then the awarder of a prize, but is rather a hunted creature; and just as the beast of prey must possess special instincts for securing his victim, so must the ardent male be equipped with special instincts for subduing the coyness of his mate.” Thus the phenomena of courtship are directly referable to a biological end, and the great importance of coyness is explained.[511]

But this peculiarly feminine instinct has a salient psychological significance as well, as I have hinted in the preface to my former work: “Just as in the beast of prey instincts of ravenous pursuit are refined into the various arts of the chase, so from such crude efforts at wooing that courtship has finally developed in which sexual passion is psychologically sublimated into love.” We must suppose that the evident refinement and depth of the marriage relation among birds is largely to be ascribed to the fact that the male does not simply excite and control his mate, but seeks to win her in a less abrupt manner by the display of his charms and capabilities; and the same is true with ourselves. Without the modesty of women, which as a rule only yields to the power of love, the sexual relation would hardly be a poet’s theme, while now love is regarded as the highest flight of the human soul. “La pudeur,” says Guyau, “a civilisé l’amour.”

This coyness, of course, can only constitute a love play when it is manifested in the struggle with sexual instinct—that is, when it becomes coquetry or flirting. As in the female spider, this impulse is converted into rage which endangers the life of the wooing male, so there are among women Brunhild natures for whom the process of courtship can never be playful. But the effect is different when repulsion is so balanced by attraction that there is alternate motion to and from, approach and then flight; though this alone does not constitute it a play, as the conflict of opposed instincts may be very serious. When, however, women enjoy the varying moods for their own sake, playful exercise of instinct easily ensues, and is somewhat akin to the fighting and hunting play, yet clearly differentiated from them. “In Paraguay,” says Mantegazza, “where intercourse between the sexes is very free, an impatient youth who has good grounds to believe that he is regarded favourably repeats in all possible variations of tone, now tender, now passionate, now beseeching, now wrathful, the one word, ‘To-day!’ and the

lovely creole who has never heard of Darwin answers laughingly: ‘No, indeed; not to-day! You have only known me ten days! Perhaps in two months.’”[512] Here the natural shyness has so little of fear or anger that the young girl actually enjoys controlling her lover and putting him off, and yet such coquetry as this is far from being the heartless behaviour so commonly designated by that word. Even this latter I regard as a love play, however, for we must suppose the genuine coquette to be heart whole. She finds her chief pleasure in her relations with the other sex, even the satisfaction of her vanity being of another quality from that which has no such connection. If we inquire what are some of the special forms of this playful coquetry we find them parallel with self-exhibition in men, except that the display is constantly held in check and veiled by modesty. While man makes much of his courage and strength in the presence of women, women are apt to take occasion to parade their weakness and helplessness. Genuine love involves, as I have occasion to remark, a combination of the sexual and fostering instincts; therefore woman’s need of his help is a strong attraction to a man, which is quickly recognised and turned to account by the female. A young girl is usually very much alive to the fact when one of her rivals makes a display of her timidity or delicacy to make herself interesting. On the other hand, women too like to show where their capabilities lie, and they exploit their housewifely qualities. This is amusingly shown among the company collected in one of the mountain clubhouses where all must go to strengthen and refresh the inner man. Great zeal is displayed by the women, aforetime so weary, in getting out the dishes, laying the table, cooking and serving the meal, and then in clearing away and tidying up. It is all done with laughter and jest, for the very novelty makes it a delight, but would their interest be so great if there were no masculine spectators in the hut?

Of all the modes of self-exhibition, there is none so important to a woman as the display of her physical charms, and the difference between the sexes is plainly shown here as elsewhere. Man in his wooing makes straight for the goal; woman’s efforts are veiled, but not hidden, under a show of modesty. The man says, “Look, I am thus and so”; the woman, “I, too, am thus and so, but don’t look.” The alluring glance which turns away if it is noticed, but not unless it is, is a purely feminine love play, and so is the smile which is not visibly directed toward the man for whom it is intended; with them, too, attention to the hair is conspicuous. It is amazing to see what importance even a three-year-old girl will attach to it, and with what jealous interest the hair of other children is observed. A doll with real hair is their chief desire. But an enumeration of woman’s peculiarities in this respect is summed up in their toilet for full dress; the

décolleté gown tells the whole story. Klopstock has the idea when he speaks in his ode (Die Brant) “of the quickening breast which so softly swells, not wishing to be seen, but sure of being seen.” It would be impossible for men to carry off such an exhibition as women do. They would either not do it at all, or else openly recognise the object of it. Women, on the contrary, would, if asked, indignantly protest against such an implication. As a rule, however, they show little disposition to exhibit their charms for one another’s benefit.

This principle extends, too, to the display of their mental graces. When the talk between a man and a woman becomes a love play, she usually tries to conceal her discovery of their congeniality with defensive trifling. She leads him on with mocking words, makes a direct attack, then pretends to discourage him, or intrenches herself in incredulity.

2. *Love Play in Art*

Before going on to consider this branch of the subject a few remarks are in order in regard to the Darwinian theory, which has been so often referred to. According to it the arts are considered as directly derived from the relations of the sexes in much the same manner as the well-known phenomena in the bird world are known as courtship arts. Far be it from me to deny the sexual instinct its part in the beginnings of art, yet I certainly consider this view entirely too one-sided. The attempt has been made, too, to refer the conception of beauty to this instinct. Grant Allen, in particular, is a latter-day exponent of this view; proceeding from sexual selection he reasons that for man mankind is the first of æsthetic objects. All misshapen, abnormal, feeble, unnatural, and incapable creatures are repugnant to us, while those are beautiful which can boast of health, vigour, perfect development, and parental soundness. Consequently our first ideas of beauty are purely “anthropinistic,” having their origin and centre in man and what immediately concerns him, his weapons, garments, and dwellings.[513] The value placed on bright-coloured shells, stones, feathers, etc., comes from their use as personal adornments. While this view certainly has much in its favour, yet its first premise is doubtful. Can we assert with assurance that the perfect human form was the first object of æsthetic admiration? If there ever were primitive men who knew no sort of personal adornment, was the well-built, vigorous, and youthful body beautiful to them? Did they first derive their intense delight in coloured stones, feathers, shells, etc., from the fact that these things could be used as bodily adornments? Such an affirmation is by no means self-evident. We find pleasure in gay or shining objects a much earlier feeling in

children than is admiration of the human form, and, moreover, it must be borne in mind that the attraction instinctively felt for the normal and vigorous youthful form is not ordinarily due to æsthetic appreciation. May it not be possible that the shining stones and gay feathers were the earliest objects of æsthetic observation, and that from them the eye first received its education and learned to admire the human figure. Or if this is too radical, is it not more prudent to assume that sensuous pleasure as such has its place in conjunction with sexual stimuli in the development of æsthetic appreciation? The personal adornments of primitive peoples seem to me to indicate clearly that men at first had very little regard for perfect physical beauty; therefore, proceeding cautiously, we are led to the conclusion that the original use of cosmetics is on the whole a detraction from racial beauty, though some painted or tattooed designs do emphasize even for our eyes the symmetry and eurythmy of the nude figure, and whitened teeth do bring out the colour effects of a dark skin. Yet there are so many forms of would-be decoration which have a contrary effect by reason of their lack of harmony with the racial norm, so to speak, that we are forced to doubt whether the natural man has much feeling for simple physical beauty in itself. Take this brief description of Scott's: "Teeth were extracted or filed to points, the head shaved, beard and eyebrows pulled out, skull compressed, feet bandaged and lengthened or deformed by turning the four smaller toes under, nose and lips weighted with rings and sticks, ear lobes dragged down until they touch the shoulders, the breasts cut off or made unnaturally prominent, the skin scarred, seamed, or bruised as well as painted, stained, and tattooed."[514] Is it not natural to infer from this that to the savage the body is beautiful only when what we think its most beautiful and characteristic features are marred or destroyed?

It proves to be very questionable, then, how far the idea of beauty is connected with the sexual instinct, though none can doubt that the use of ornaments plays an important rôle in self-exhibition before the opposite sex. It would be hazardous to state, however, that courtship is their only end, since there are terrifying decorations which would not be useful in that capacity unless, indeed, as a means of frightening away rivals, which is hardly probable. There is the social aim to be considered, and the simple pleasure in possessing beautiful, unusual, or valuable things (we put such things in our pockets, but the savage has to attach them externally).[515] Hardly any primitive method of decoration can be adduced as directly strengthening Darwin's theory; the imitative principle controls the beginnings of plastic art, courtship is not the exclusive aim in savage dancing, and as for the music and poetry which go with the dancing, they rarely deal with such subjects.

It may be demurred that such arts have gradually been divorced from their original intention, but the facts do not point to it. Though some scholars regard other ornamentation as of later origin than the use of cosmetics, there is nothing to prove that this is a fact.[516] Moreover, in the development of the special arts a noteworthy fact becomes prominent—namely, that the sexual element appears stronger in the later stages, while at first other elements are quite as important or even far more so. Thus love is a conspicuous theme in the lyrics of civilized peoples, but of primitive races Grosse declares: “It can not be ascertained that the Australian tribes ... have produced a single love song; and Rink, their most faithful student, says that the Eskimos hardly show any appreciation of the sentiment of love.”[517] In our dancing the two sexes unite in a movement-play, and Orientals have beautiful girls to dance before them. Among savages, on the contrary, imitative dances are much more common, which have no connection with sex relations. Indeed, we often find rules which confine dancing to certain places of resort where women are excluded. We can say of personal adornment too that civilized peoples apply them much more to the uses of courtship than do savages.

These things being true, it is well to use caution in applying the Darwinian theory to the origin of art; while uses of courtship very often accompany the appearance and development of art, we must still cling to our conception of play as its principal source. Delight in sensuous pleasure and in regularity, the charm of rhythm, enjoyment of imitation and of illusion, the demand for intense stimuli, the attraction of attempting what is difficult—all are elements in the principle which we have repeatedly found and shall find more and more, connecting the spheres of play and art without necessarily touching at all on the question of sex. Even self-exhibition itself may depend as much on the social as on the sexual instinct. I am convinced, then, that Schiller was in the main right in deriving art from play, while Darwin’s theory must be relegated to the position of a secondary or partial explanation.

Having made this critical review of the subject, I may give my undivided attention to the effort to prove that art, in its last analysis, does include the sexual element along with all else that appeals to the feelings, and so is often converted into a love play. But we must distinguish such play as it is manifested in artistic production and that which appears in æsthetic enjoyment. We often find courtship carried on by means of the former, while the latter is concerned only with the playful enjoyment of sexual excitement, unconnected with any serious aim. Courtship by means of artistic production is a subject which has been pretty thoroughly canvassed and will have but brief mention here. It exhibits a playful

character, such as the above-mentioned forms of self-display when the wooer enjoys the mere act of unfolding his charms. Among savages it is usually confined to the use of pigments and dancing. Westermarck and Grosse have recently enumerated the principal uses of the former. But, as I have said, such decoration is not exclusively for courtship purposes; the desire to outshine other tribes is often a powerful motive. The psychological aspect of this sort of thing is interesting. The later development of fashion teaches us that mere delight in finery and ornament is a very small part of it; there is a complication of relations. When we see an elegant old gentleman at a watering place with a flower in his buttonhole, we attribute his state of mind to a belated feeling of youthfulness; and so the adornments of savages and the coquette's toilet owe their effect less to a direct appeal to the senses than to their symbolic meaning. They betray the demand for ornament, and this demand again discloses the adaptability of ornamentation to sexual purposes. Our peasant youths at the fairs put labels in their hats announcing to the interested public that they are in the matrimonial market, and all decoration for courtship purposes says the same thing in effect. Their suggestiveness is not so much in the external appearance as in their symbolism,[518] and this may explain the fact that what is merely striking is as effective in primitive and sometimes in modern decoration as what is really beautiful.

Savage dances sometimes serve the purposes of courtship, and, of course, the wild intoxication of movement which they lead to is itself calculated to produce sexual excitement. Notes on obscene dances may be found in the works of Waitz-Gerland (Australian), Turner (Samoan), Ehrenreich (Brazilian), Powers (Californian), Fritsch (Zulu), and others. When such dances serve the purposes of courtship they are not uninteresting. When they consist of a wild *mêlée* in which participators and spectators are thrown into a condition of ecstasy, the idea of discriminating choice on the part of the women is difficult to apply. There is, however, no such difficulty in the way of my theory that violent excitement is a necessary preliminary. I give two examples from the bird world: "The black-headed ibis of Patagonia, which is almost as large as a turkey, carries on a strange wild game in the evening. A whole flock seems to be suddenly crazed; sometimes they fly up in the air with startling suddenness, move about in a most erratic way, and as they near the ground start up again and so repeat the game, while the air for kilometres around vibrates with their harsh, metallic cries. Most ducks confine their play to mock battles on the water, but the beautiful whistling duck of the La Plata conducts them on the wing as well. From ten to twenty of them rise in the air until they appear like a tiny speck, or entirely disappear. At

this great height they often remain for hours in one place, slowly separating and coming together again while the high, clear whistle of the male blends admirably with the female's deeper, measured note, and when they approach they strike one another so powerfully with their wings that the sound, which is like hand-clapping, remains audible when the birds are out of sight."[519] In cases where this sort of orgy, indulged in by flocks of birds, serves sexual purposes, as it probably often does, my theory proves to be more explanatory than Darwin's, and the same may be said of our general dance with its direct appeal to such stimuli. It is much less likely that some of the dancers will single out special partners than that participant and spectators alike will be thrown into an ecstatic state in which all restraints are cast off.

In considering such dances the question must be met whether they, like the courtship arts of birds, are referable to instinctive tendencies. It may be inferred from the introductory part of this section that I am somewhat sceptical as to that. I do, indeed, doubt whether human dancing should be attributed exclusively to courtship, and I think we can hardly emphasize too much the fact that while man possesses the full complement of instincts, they are subordinated in his case in favour of intellectual adaptations. Of birds we know with comparative certainty that they must learn and practise their courtship arts practically without teachers; but no one will affirm that individual man without tradition or example would turn to ornament and dancing on the awakening of sexual impulse. Only a general disposition toward self-display is instinctive, the how and when being left to invention and tradition. Perhaps some particularly significant movements are specializations of this disposition, as, for instance, the hip movement, which is accentuated in the waltz and which has influenced plastic art since the time of Praxiteles. There must be much more thorough investigation of the subject before we can affirm even the possibilities respecting it.

Of the other arts, that of lyric poetry is about the only one which we need to consider in relation to courtship, and this more especially in its connection with music. Among primitive races dancing invariably accompanies the recital of such poetry. The troubadour is the product of a higher social condition. The lyric, too, played an important part as an instrument of courtship in Mohammedan civilization during the fifteenth and sixteenth centuries, as is apparent from the Thousand and One Nights Tales. "The ear often loves before the eye," to quote from one of them which deals with the winning power of beautiful verse. In the story of Hajat Alnufus and Ardschir the amorous prince, who is disguised as a merchant, seeks to awaken the love of the proud princess by means of passionate verse, and the description is fine of how a tender interest

is aroused in the coy and high-spirited beauty toward the persistent wooer, though it develops, it is true, into genuine love only under his gaze. “O Hajat Alnufus,” runs one of these love poems, “make happy with thy presence a lover whom absence is undoing. My life was surrounded with joy and bliss, but now the nights find me raving and mad with love. Must I always sigh and moan, always be cast down and hopeless? All night long sleep shuns me, and I gaze wearily at the stars. Oh, have pity on a dismayed and suffering lover whose heart is sad and his eyes weary with watching!” In the story of Hasan of Bassrah we have a feminine counterpart of this which deserves to be numbered among the finest pearls of Oriental lyrical poetry. Hasan’s lady is so rejoiced to see him after a long separation that she breaks forth in the following rhapsody: “I breathe in the air which wafts from your land and refreshes you in the morning. I ask the wind about you whenever it blows from that way; I think of no one but you.”

More common are the instances which, while not directed toward a special wooing, yet have the character of play with the sexual emotions which is pleasurable in itself, and involve the question of the connection of such stimuli with æsthetic enjoyment. I maintain that this element is much more conspicuous in the use of cosmetics and in dancing than is actual courtship, and even in the ornamentation which seems far from the sphere of sex, and in architecture itself love play is not entirely lacking at any stage of its development. Von den Steinen has told us what pleasure the Brazilian tribes take in decorating their tools with conventionalized *ulúri*, which are triangular pieces of bark such as the women are fond of wearing. It is very conspicuous in all the adornments of these people, who make no secret of their fondness for it. This feeling, too, is at the foundation of the employment of nude female figures for decorative purposes in renaissance art. Obscene exaggerations of the masculine figure are not uncommon in plastic representation, and are no doubt due as much to sexuality as to any religious significance (such as the exaltation of the idea of productiveness, etc.). Nor is love play lacking in the art of cultured peoples, though here we are not confronted with the crude sensuality, which is of comparatively little psychological interest, but with that more subtile effect of the instinct, that tender, moving, melting sensation which must be felt to be understood, for it can not be described. In my Einleitung in die Aesthetik[520] I have set forth the grounds on which the philosopher Stöckl objects to representations of the nude. “As a result of original sin,” he says, “mankind is susceptible to evil passions which are aroused at the sight of nakedness, and the will is incited to connivance in the sinful lust. Of original sin and its consequences, it is true, most advocates of the nude in art are quite ignorant theoretically, and yet it is a truth testified to

by the experience of every man, even though he be a student of æsthetics, that there is in us a law which is at variance with spiritual law, and that we ought to avoid everything that tends to bring us under its power, to which things nakedness in art belongs."[521] Whatever protest can be made against this in the name of art, and however it may be insisted that there is such a thing as chaste nudity, still I am convinced that in the extraordinary attractiveness of the work of Praxiteles and Canova, for example, subtile emotions connected with the sexual life are involved. I have noticed that for the uneducated person Canova's Cupid and Psyche is regarded as embodying the acme of sculptured beauty without the observer having the remotest suspicion of the source of much of his intensity of admiration. The higher the æsthetic culture, however, the less as a rule (not always) is this force operative, and therefore directly in the interests of chastity the answer may be made to Stöckl's challenge, that an artist may experience a purely æsthetic enjoyment of form in the nude figure which is hardly possible to the uncultivated person.

It is hardly necessary to dilate on the influence of the instinct in question in the sphere of painting. Here, too, it is more evident to the average man, with his naïve enjoyment of materiality, than to the connoisseur. Andrée tells us that many tribes of men cherish indecent pictures and statues which have no religious symbolism, and we all know how common is the habit of drawing such things on fences and walls. But more significant than such grossness is the popular preference for sentimentally suggestive pictures. The passionate admiration of some neuropathic persons for the flat illustrations of a fashion paper is but a pathological exaggeration and distortion of the amazing popularity of some insipid, wide-eyed, simpering feminine figure, and the almost worse blond hero of many so-called artists. It is not necessary to call names, but a student of psychological æsthetics should not shrink from stating *sine ira* the true (though often unconscious) grounds for the admiration bestowed on such things, nor ignore its significance.

While music comes in the province of our inquiry only when the accompanying words, situation, and explanations, or the subjective temper of the hearer lends to the tone movements a sexual meaning,[522] poetry, on the contrary, as has been said, plays a very large part in the business of love, and even more so among civilized than among primitive people. Besides love lyrics, which have been sufficiently illustrated, there are narrative descriptions of love scenes and processes—not only the numerous poetic lucubrations which deserve to be designated as erotic, which means in plain English indecent, but the whole immeasurable sea of novels and romances whose leading interest depends on

this theme. Many can read such tales only in their youth (boys are especially liable to this passion for romance immediately after the subsidence to their attack of Indian tales), but the majority retain their capacity for inward sympathy with the trials of lovers; and here, too, the taste of the general public is as opposed to that of connoisseurs as in the case of pictures. The ability to cater to this taste is possessed pre-eminently by women, because the false idealism which abounds in such works accompanies a certain ignorance of the facts of life which women retain oftener and longer than men. The study of some of the better class of these romances—notably those of E. Marlitt—is not without psychological interest. One of our comic papers not long since quoted this passage, ostensibly from a novel: “In an adjoining room sounded a bearded masculine voice”; and the sentence might serve as a motto for the title page of a treatise on the yellow-covered romance of the type which is so highly prized by hundreds of thousands of readers of both sexes. A favourite theme is to follow the fortunes of a young married couple who are estranged at first, as in Marlitt’s Zweiter Frau, Werner’s Glück auf, and Ohnett’s Hüttenbesitzer. It is, of course, psychologically and æsthetically interesting to follow the conversion from real or pretended aversion to attachment, a process from which, Spinoza tells us, deeper love results “quam si odium non præcessisset.” But the extraordinary attractive power of this novel specific for bringing about the desired result arises from a special stimulus not difficult to identify from our point of view, and inherent in the situation.

3. *The Comic of Sex*

This subject offers a difficult problem. The fact that all mankind, adult and child, the refined, cultured person as well as the primitive savage, the latest representative of centuries of civilization and his remotest ancestor, alike show a propensity to take pleasure in things relating to this subject, is one which we may deplore and yet can not characterize as entirely inexplicable. But we may ask why it is considered comical.

It frequently happens that the comic impression is heterogeneous, as in the ribaldry which perverts wit from its proper sphere and makes the offence against good manners take the form of a social blunder, while unintentioned indecency may raise a laugh at the expense of the perpetrator. Yet it can not be denied that the mere introduction of the sexual element is an independent source of amusement and one which requires some special explanation.

The common solution as set forth by Vischer and Zeising is to the effect that this stimulus is identical with that of any other impropriety, the laugh being at the

outrage to conventionality.[523] But while this explains some cases there are others which it does not touch. Civilized man who is prohibited by strict rules of propriety any reference to such subjects may experience a feeling of triumph when he boldly bursts the bonds of custom, but with children and savages the case is quite different, and they exhibit a peculiar enjoyment of such things which is not identical with their relish of forbidden fruit. Von den Steinen tells us that the Bakaïri consider it a shameful thing to be seen eating, but do not regard the broadest reference to things sexual as the least breach of good manners.[524] Yet they too find them comic. "It is true," says the famous and learned traveller, "that things which would seem indecent to us afforded the Bakaïri, both men and women, evident enjoyment, and if any delving pedant who considers modesty in our sense an inborn inheritance of mankind could follow the rising tide of gaiety which would have offended a member of our degenerate race, he would be obliged to admit that their hearty laugh is not shameless in our sense, nor is it an effort to conceal embarrassment. Yet it is undeniably erotic in a mild way, and resembles as much as the difference in circumstances and conditions will allow the laughter over games with us in which the two sexes are thrown together."[525]

What, then, is the true source of this? Possibly the following considerations may serve to throw some light on it: First, it may be premised that allusion to sexual subjects has some association with the idea of physical ticklishness. "The sexual parts have a ticklishness as unique as their function, and as keen as their importance. The faintest suggestion of them has great power over the risibilities of children."[526] More important still are two other points which make the sexual comic a special case of offensive and defensive fighting play, such as we considered in the previous chapter. The former may be inferred from the fact that this passion throws men and animals into a state of ecstasy which robs them of self-control, and, like intoxication, temporarily "disables them in the struggle for life."[527] As a result of this the man who by word or deed actually places himself in any relation to this side of life calls forth in us a feeling of superiority which pleases us and excites our laughter. This applies especially to the amusement which all displays of amorousness induce, whether they are modest or bold—the one so long as it does not move, and the other so long as it does not disgust us. In other cases the fighting play becomes defensive, and this side of the question seems to me to exhibit more delicate psychological distinctions, since it concerns the thrill of sexual emotion which is excited in the hearer or spectator, and which, while it is agreeable, yet, coming as it does from without and therefore not under his own control, he laughingly repels it. Kant notices that amusement is generally caused by what is momentarily deceptive. If we accept the purely

intellectual conception of deception—namely, that it is a shock or a slight confusion—then we may regard its conquest as a genuine triumph. Such a triumph we experience when we repel the incipient stimulation, and the contrast of ideas thus called up gives the finishing touch to the comic effect.

III. Imitative Plays

The Tschwi negroes have a proverb to the effect that “no one teaches the smith’s son his trade; when he is ready to work God shows him how”; and I. G. Christaller obtained the following explanation from one of the aborigines: “If you have a trade, and a son who watches you at work, he easily learns it. God has implanted in children the faculty of observing and imitating, and when the son does what he has seen his father do so often it is as if he knew of himself. It is, indeed, God who teaches him!” And this childlike elucidation is not a bad one of the significance of playful imitation in life. The inborn impulse enables a child to learn alone what he either could not do at all or only after painful and wearisome teaching. Imitation is the connecting link between instinctive and intelligent conduct. Thanks to it we can add much to our accomplishments without other instruction, and in a manner agreeable to ourselves, for enjoyment of its exercise is natural, so that, to use the language of the African, it is indeed God who teaches us.

The earlier psychologists gave too little attention to imitation. The work of Tarde[528] and Baldwin[529] has first brought to many the knowledge that it is probably destined to win a prominent place in biological psychology, similar to that accorded to the idea of association in the older theories. At any rate these investigators have certainly expanded the common acceptation of the term. Tarde says of a man who unconsciously and involuntarily reflects the bearing of others or accepts outside suggestion, that he is imitating, and he regards such magnified imitation as a special case of the great cosmic law of repetition (ondulation, génération, and imitation are the three forms of “répétition universelle”). Baldwin calls stimulus-repeating repetition in general imitation (so far as it is produced by the organism itself), and so includes the alternate expansion and contraction in the lowest organic forms. According to him, the essence of imitation lies in the fact that when movement follows a stimulus, the stimulus is renewed, giving rise to what may be called “circular” reaction. Imitation of the acts of another individual, from the perception of which a duplicate act results, is a specialized form of this circular reaction. Baldwin has tried to prove that the accommodation of an organism to its environment is a phenomenon of “organic

imitation," and he grounds his new theory of "organic selection" on this principle. I can not here dwell longer on it than to say that it undertakes to mediate in the strife between neo-Darwinism and neo-Lamarckianism, since the survival of the individual with the necessary adaptibility gives selection time to produce hereditary adaptations with the same general trend (selection among coincident variations). Our purpose is best served by confining ourselves to the ordinary use of the term imitation, namely, "The repetition of the acts of one individual by another,"[530] as Lloyd Morgan has defined it.

Even this is of the greatest biological and psychological import, since it is responsible for what Baldwin calls "social heredity"; the psychic heritage or "tradition," independent of physical heredity,[531] which hands down acquired habits from generation to generation. In using the word tradition, indeed, one naturally thinks more of habits acquired by their owner, who by precept and example imparts them to others, so that emphasis is laid first on the acts of the originator, though the inclination to impart would be fruitless without imitation on the part of the pupil. On close examination we find this literal use of the term far from satisfactory; as a rule, the acquisition of the habits of others depends entirely on the imitator, without intentional assistance from the model, a distinction which finds expression in the common proverb that example is better than precept. The operation of this principle is apparent among the higher animals. Wallace lays great stress on it, though in a somewhat partial way. Weismann employs the word in its wider sense when he says: "A young finch which grows up alone sings untaught the song of its kind, though never so beautifully nor so perfectly as when an older bird which is a fine singer is given him as a teacher" (teacher is here not to be understood literally). "He is largely influenced by tradition, though the fundamental principle of the finch's song is already implanted in his organization."[532] Indeed, the data of animal psychology give us a sort of experimental proof of the importance of the imitative impulse, since animals reared away from their own kind but with some other species are often strongly influenced by the alien models, in spite of their inborn instincts. An attempt to formulate satisfactorily the biological significance of imitation results somewhat as follows: To the higher animals imitation of their own species is an important adjunct to instinct. The young finch has, indeed, an inborn instinctive capacity for producing the note characteristic of his kind, but even with the assistance of experimentation this instinct is not adequate to his needs until imitation of practised singers rounds out, so to speak, the inherited capacity by means of acquired adaptations. It is evident that there are two ways of regarding this conception of imitation. The one which Baldwin develops is

implied in Weismann's "already" when he says that the fundamental principle of the finch's song is "already" implanted in his organism, thus implying that imitation is an essential factor in the growth of his instinctive equipment. When the more intelligent individuals of a species have by means of independent accommodations made new life conditions for themselves they can manage to keep afloat by the aid of imitation until "natural selection, by favoring and furthering" coincident variations (those tending in the same direction), can substitute the lifeboat heredity for the life-preserver tradition.

The other view, as I have presented it in The Play of Animals, takes just the opposite ground—namely, that imitation enables the animal to dispense with instinct to a much greater degree than would otherwise be possible, and so gives free play to the evolution of intelligent control. Here we find imitation tending to relegate instinct to the category of things rudimentary, while, according to the hypothesis analyzed above, it favours the growth of instinct. "It is through instinct," says Baldwin in a notice of my earlier work, "that instincts both rise and decay." For our purpose the second view is evidently the more serviceable, since it is undeniable that in man at least, the transition from fixed instincts to more plastic tendencies, with their partial supplanting by acquired adaptations, has been the general course of phylogenetic evolution, and to this process imitation is of extraordinary value.[533]

Finally, in pursuance of the same line of thought, it seems that imitation, at least in man, goes far beyond instinct; for by his untrammelled relations to the external world man has been enabled to climb beyond the ground floor of Nature to a higher plane of culture. Yet of all his means of improvement none to speak of are physically inherited. Thus we see the idea of imitation expanded not only to supply the deficiencies of instinct "not yet" or "no longer" adequate, but to such an extent that on it depends the "social" heritage of culture from generation to generation. This powerful impulse, without which there could be no teaching, no handing down of anything to posterity, thus becomes the indispensable medium of continuity, and therefore the necessary postulate of a cumulative human culture, as opposed to one constantly recommencing *ab ovo*. But the further question arises, May we not be justified in calling the imitative impulse itself an instinct? Once granted the fact of instinct at all, and an affirmative answer seems imperative to one who is familiar with the workings of this impulse in men and animals. On these grounds I have committed myself in my former work to the designation of imitation as an inborn instinct, and yet I must admit the logical inconsistency of this, since the very conception of instinct dispenses with the use of imitation. As commonly understood, instinct may be

defined as a hereditary and clearly defined motor reaction to a given stimulus. In imitation, on the contrary, we have a thousand varying reactions, for as the stimulus (the model) varies the whole character of the reaction follows suit. What becomes of the fixed hereditary orbit if at each repetition entirely new movements, sounds unconnected with the foregoing ones, etc., are produced? "To assert that imitation is instinctive," says Bain, "is to maintain the existence of an infinity of pre-existing associations between sensations and actions."[534] This appears to me to be the one insurmountable objection among the many which he and others have brought against the conception of imitative instinct, and it is serious enough to cause me to modify my former position.

As a point of departure, suppose we take the assumption that, with certain limitations, a psychophysical adjustment, not in the ordinary sense instinctive, accounts for the genesis of imitation. This adjustment depends on the fact that in conscious activity a necessary connection exists between the movement produced and the antecedent concept of the movement. On the one hand, then, a movement is said to be voluntary only when the motor act is accompanied with such an idea of movement, while the other view implies that the idea itself is the thing which urges its own fulfilment.[535] If this is so, the mere concept of the movement performed by another impels us to perform it as well, and hence arises imitation. Although the difficulty is to establish the correctness of this assumption,[536] yet we may be pretty sure that the concept of a possible movement, if not crippled by antagonistic motives, does induce a certain readiness for fulfilment.[537]

This analysis, it is true, acquaints us with a necessary condition of imitation, but as little accounts for the amazing force of the impulse as the mere conception of movement accounts for voluntary activity. While every concept may impel to the corresponding motor act, we know from experience that such tendencies to form habits are checked and aborted by all sorts of hindrances, mere inertia being sufficient in many cases to counteract the motive power of such concepts. There must be special reasons, then, which lend to the perception of a movement performed by another such extraordinary motive power. We have still to meet the question whether there may not be an inherited relation developed on the foundation and presupposition of the "readiness" described above. The thousand sensory motor paths involved in it can not be determined by heredity, since they presuppose acquired experience (as in learning to speak, first crude experimentation, then imitation). But the strength of the pleasurable quality in the reproduction of a movement accomplished first by another, the strenuousness

of the effort which presses for expression, as well as the seriousness of the disappointment in cases of failure, are direct results of selection and the developmental factors connected with it. In support of this proposition we may refer to the social instincts, the simplest of which is the associativeness of members of the same race, tribe, or faction. Its demands lead to a kind of imitation, at least in movement impulses (Hudson assures us that the young pampas sheep runs the instant it is born after its rapidly running mother), and the impulse to answer a warning or alluring call. Pleasure in satisfying this genuine instinct is especially evident where one of the participants (they being usually of the same species) accompanies the signal with appropriate movements.

I permit myself no judgment of the value of this hypothesis, but I believe its adequacy to meet the case is incontrovertible. Bain, too, in the fourth edition of his work cited above, has made a suggestion looking in the same direction, by which the use of the word instinct gains a certain justification. Nor should it be forgotten that to strengthen this “readiness” a whole series of other requirements may be present, which for convenience in this analysis I may call instinctive. Perhaps an illustration of a movement concept which is not imitative in the ordinary sense will make this clear. If we think intentionally and definitely of the movements involved in whistling, we are likely to feel a mild inclination to whistle, which, however, is commonly easy enough to overcome. Therefore we call it a certain “readiness” in preference to a stronger term, such as “impulse.” But let this mental process take place in church during service; the corresponding action, it is true, is not performed, because of the influence of contrary motives, but the impulse may nevertheless be so strong that their subject suffers great annoyance. Why is this? Probably because the idea of not whistling excites the instinctive impulse toward activity of the movement apparatus (experimentation) as well as the fighting instinct,[538] which resents such constraint and lends itself as a powerful auxiliary to the movement impulse. It is just in this way that the perception of movement made by another arouses special instinctive emotions, and illustrates the power of the imitative impulse. This, then, is a brief explanation of the grounds of the theory developed above, according to which imitation serves as a complement to instincts which have been weakened in favour of intellectual development or are, for whatever reason, inadequate to the individual’s life tasks.

Thus we know that a child has the impulse to make use of his motor apparatus, but this impulse is strengthened when another person makes a movement which attracts the child’s attention. The concept as such produces a mild inclination and the natural impulse to move weighs down the scale. The little girl inherits an

instinct for nursing; alone, it would probably not be strong enough to originate nursing play, and quite as little would the idea of the movements involved which the child acquires from watching her mother have that result (as witness, the boy). The two together produce the familiar result. In the same way the boy's fighting instinct impels him to imitate all warlike demonstrations. We may say that the "what" of the subject is answered by the movement idea and the "that" predominantly by the corresponding instinct, though acquired necessity of course may do the same thing. Moreover, imitation has a special affinity for curiosity and the fighting instinct. The former asks concerning an unusual movement by another, "How does he do it?" and an effort to experiment at once ensues, while the fighting instinct is on the alert at the perception of a difficulty, and loses no time in overcoming it in order to enjoy the "I can, too," of success. This success may be a triumph over the model, since if no superiority is proved we arrogate to ourselves a capacity which up to this time has been the property of another.[539] It may, however, be mere pleasure in overcoming the difficulty, as when we try to imitate qualities which we admire in another, adding to the combative impulse the desire to make one's self agreeable or to subordinate others. But so far as conscious playful imitation is directly concerned, the struggle with difficulties is still in the foreground. We must remember, too, that with many of the higher kinds of imitation—pre-eminently so with that which may be called constructive, since its material is invariably appropriated from foreign sources—the pleasure which is derived from recognition and from illusion adds to its play the powerful charm of imagination.

Although I have presented here only a few of the leading features which an analysis of the imitative processes reveals, enough has been said to show how complicated and difficult the problem is, and to render advisable a general summing up in more compact form of the results of these somewhat rambling observations. It will not do to call imitation instinct and leave it at that, since it is not a specific but quite an involved reaction. Moreover, the condition of imitation, namely, the tendency of movement ideas to produce corresponding movements, is not itself instinctive; but we have seen that this tendency alone does not explain all that we include under the name of imitation. This tendency of the movement ideas must have special grounds furnished by organic needs, and especially those which are instinctive; when the general idea of movement is coincident with one of these the impulse toward discharge becomes very strong. We cited in illustration of this the general movement-impulse, nursing, curiosity (how is it done?), belligerence (not only as regards distinctly hostile movements, but sensation as well), recognition, and illusion. If there is nothing else, then

imitation taken alone is no instinct; it is only in very close connection to instinct, as our biological point of view has shown. It is, however, probable that these limits are not reached by the simplest imitation, such as coughing, gaping, etc., and use may be made of the hypothesis of transference (*loi de transfert*) from specific social instincts, which are themselves the result of a certain degree of imitativeness of the movement idea (agreement, answering, and the like) to movement itself in cases involving the movements belonging to a species. By this means natural selection of whatever developmental factor is employed acquires an essential impetus. Whoever regards such collaboration as probable will consider imitation as a phenomenon at least similar to instinct.

Thirdly—and this point will be quickly disposed of—when is imitation to be regarded as play? Evidently we must apply the psychological criterion; imitation is a play when it is enjoyed for its own sake.[540] Imitation transcends play at its highest and lowest limits. Simple reflex reactions, such as gaping when another gapes, fleeing because another has fled, etc., can not be called play in a psychological sense, nor is the child's first reproduction of sounds playful. Only when he repeats the performance from enjoyment of his success can we be sure of the thing from a psychological standpoint.[541] The limit is passed in the other direction by rendering the movements mechanical, so that the imitation is performed involuntarily, no longer affording enjoyment of the act itself, as it is now directed toward the external aim. Here belong imitative teaching (so far as it is not in itself enjoyable) and the imitation of an exemplary personality or ideal which is so important to ethics. In the latter, however, a suggestion of playfulness is sometimes present, though it would seem that nothing could be further from the proper sphere of ethics; when poetic figures serve as models, however, it is sometimes hard to mark the limit between the serious and the playful.[542]

In conclusion, I would remark that imitation is almost never merely that; it is creation as well, production as well as reproduction. Close on the heels of imitation comes imagination, and that in the double meaning of the word which we have learned to know. Imagination expands the copy into a full likeness of the original, and then creates the illusion that it is the original. However, imitation may actually be new creation. As Baldwin lucidly puts it, the child's persistent imitation calls into the arena with the satisfactory copy a host of new combinations which may be non-essential to this special aim, but which claim the child's attention and interest as discoveries of his own. He is often so interested in these unexpected combinations as to lose sight of his original

purpose, and runs to his parents or comrades to show what he can do.[543]

In turning to the consideration of imitative plays I prefer to divide them into the following groups for the sake of convenience. First, I shall speak of playful imitation of simple movements, which are preparatory to more complicated processes, distinguishing between optical and acoustic percepts. Then follow two important specialized groups, namely, the dramatic and plastic or constructive imitation; and finally I shall treat inner imitation as a fourth kind of play.

1. *Playful Imitation of Simple Movements*

(*a*) Optical Percepts

According to Tracy[544] there are few points so generally accepted without question by child psychologists in general as that of the beginning of imitation in the second half year. Yet this agreement is not so universal as might be wished. Thus Baldwin says that experiment with his own children has left him utterly unable to confirm the results reported by Preyer, who thought that he could establish the presence of imitation in the third or fourth month. Baldwin, like Egger, could not be sure of it before the ninth month.[545] Strümpell, on the other hand, thought he recognised the beginnings of it in the twelfth week. "Careful observation assured me that the child was sympathetically excited by the movements of adults in speaking. When any one was talking to him he watched the mouth instead of the eyes, as formerly; and as he watched, his own mouth moved softly, the lips assuming different positions, which undoubtedly resulted from movements in the inner part of the mouth."[546] Baldwin may be right in regarding such very early observations as frequently misleading, since the correspondence with a model is apt to be accidental, though I do not think that this supposition explains away all cases. However, enjoyment of imitation and consequently play with it is undoubtedly of later origin. This observation of Preyer may be called playful. "In the tenth month correct copies of various movements are constantly produced, and that with full consciousness. In the often repeated hand and arm movement of 'shaking ta-ta' the child gazes earnestly at the person showing him the signal, and suddenly repeats it correctly."[547] This is not the unconscious or involuntary copying of strange models which is so common with young and old. The question no doubt arises in the child's mind, "How is that done?" and when followed by the successful accomplishment of the task, is further succeeded by the joyful feeling of "I can,

too," and playful use of the imitative faculty. The same is the case with the following instances: "As I, with the intention of amusing the child, waved my right hand to and fro before him, he suddenly began to move his own right hand in the same way, and from that time imitation slowly but surely progressed. On the day following, he was much quicker in repeating the attempt, and evidently wondering at the novelty of his experience, watched attentively now my hand and now his own.... At fifteen months the child learned to put out a candle flame. He blew six or seven times in vain, and kept grasping at the flame, laughing when it eluded him, and straining after it, while puffing and blowing with distended cheeks and lips unnecessarily protruded.... A large ring which I slowly laid on his head and took off again the child seized and unhesitatingly set it on his own head (sixteen months)."[548] Sigismund says: "The child learns all his little arts from his nurse: shaking good-bye, patting, kissing his hand, bowing, dancing, etc. But he copies of his own accord movements and attitudes which strike and please him. He walks with his father's stick, tries to smoke a pipe, puts wood on the fire, scribbles with a pencil, and, in short, imitates whatever he sees done about him."[549]

From a psychological standpoint there are various distinctions to be made in these instances. Sometimes it is the movement itself which forms the centre of interest, while again the result of the movement is the thing aimed at, making the muscular exertion only a means to the end (as in blowing out the light).[550] It is significant that the pleasure derived from imitation is more conspicuous in the first case; and another important question is, whether more of curiosity or more of pleasure in competition is involved, since the one likens imitative activity to intellectual experimentation, and the other assimilates it to rivalry. In the one case the child's attention is fixed on the question, "How is that done?" He is interested in the *modus operandi* as in the solution of a riddle. In the latter case the movement made in his presence arouses him like a challenge: "You can't do that!" And his whole effort is directed to the proof that he can. The two factors do not necessarily exclude one another; they may work together. The exhilarating effect is heightened by strong emphasis of the fighting element; the stronger the consciousness that the task was difficult, though now achieved, the more will both child and adult enjoy the imitation—another support to our theory of the comic.

In later life, at least among civilized people, the impulse to playful imitation of the movements of others is not so strong,[551] except in the case of teasing mimicry. Most adult imitation is either of the character of involuntary adaptation, or for some specific end, and is thus partly within and partly without the sphere of play. When, for instance, the southerner who goes north to live, gradually controls his lively gesticulation, it is done unconsciously and involuntarily, unless he assists in the process because he does not wish to appear ridiculous. There may be some imitative play in the indulgence of air-castle building, founded on external models, though careful discrimination would be needed to detect it always. Then there is the callow youth who copies a leader of fashion in his manner of walking, talking, and acting, and finds sufficient satisfaction in the success of his efforts without any further aim. Sometimes, too, that imitation founded on serious effort is manifested in trifling ways. I do not know whether such amusement is now dispensed with in teaching writing; my experience was that the higher classes at school as well as the children tried to model their hand after that of some admired student, teacher, or friend. Sully's remark that imitation is sometimes "the highest form of flattery" is applicable here.

(*b*) Playful Imitation of Acoustic Percepts

A group occupying a position midway between the foregoing and that which is

now to be treated of consists of such imitations as find their antecedent in movement which appeals to the eye and yet whose real effect is in the repetition of acoustic impressions. Preyer records the following unsuccessful effort at the end of the first year: “At this period, if any one struck with a salt spoon on a glass, making it sound, my child would take up the spoon and attempt to hit the glass in the same way, but he could not get the tone.”[552] Quite similar is Baldwin’s observation: “H——’s first clear imitation was on May 24th (beginning of ninth month) in knocking a bunch of keys against a vase as she saw me do it, in order to produce the bell-like sound. This she repeated over and over again, and tried to reproduce it a week later when, from lapse of time, she had partly forgotten how to use the keys.”[553] This sort of imitation, where, as in putting out the light, the result is more important than the movement itself, is more enduring than simple movement imitation, because the end attained is itself a source of pleasure.

The most important phase of acoustic imitation is that which aids in the child’s acquirement of speech. In studying experimentation we found that voice practice is an indispensable antecedent of learning to talk. Add to this the imitative impulse and the equipment is complete for acquiring a mother tongue. The child imitates all the kinds of sound that he hears—the howling of the wind, animal calls, coughing and sneezing—but of course he hears most constantly the sounds of his native language, and so it naturally follows that he gives it particular attention, which constantly increases as he becomes aware of his parents’ delight in his acquirements and as he perceives their practical use.

Sigismund has asked whether imitation of singing may not serve as an introduction to language lessons. He says: “The first real imitation which I observed in my boy was not repetition of articulate speech, but of a musical tone. When he was fourteen months old and had as yet imitated nothing (?), I occasionally sang to him a popular song whose melody began with a downward quarter (F-C), which interval recurred frequently and forcibly in the song. I was greatly surprised when the child, though very drowsy, sang this measure correctly, an octave higher. The following day the same thing happened, and this time without any example.... Is it the rule or the exception that the infant sings imitatively before he speaks so? Many mothers whom I have questioned were uncertain whether such singing had occurred at all, but they had probably simply failed to notice it. The result of my own investigations and observation points to the probability that children, like birds, more easily comprehend and repeat singing tones than speech.”[554] Ufer justly replies to this that while children do

indeed often sing before they can talk, we have no reason to affirm that this is the rule. The child observed by Miss Shinn, for example, first made feeble efforts to imitate singing in its fortieth month.[555] It is always unsafe to attach too much importance to isolated cases. It is characteristic of man that many of his inherited capacities are left afloat, as it were, and must be anchored by individual experience, thus affording opportunity for the development of varied individuality. Consequently, it is hardly possible to be too cautious in drawing conclusions for phylogenetic evolution from ontogenetic development.

It is self-evident that not all the sound imitations which underlie the acquirement of speech are playful in a psychological sense. Words are often babbled mechanically without any special enjoyment. Moreover, as soon as the child has overcome the difficulties of the first stage of his language study and knows how to express his wants, he often makes use of expressions whose model exists only in his memory, without any playful intention. Still, a considerable part of the effort to learn to speak is properly imitative play. Preyer's description shows us how the child put his whole soul in the attempt to understand the lip movements, and in another place (fifteen months) he says, "If he hears a new word, 'cold,' for example, which he can not repeat he is angry or turns his head away and cries."[556] This demonstrates the presence of fighting play; when the effort to be able to say "I can, too," fails in its aim, consciousness of defeat is betrayed by ill humour. Older children, too, often obtain new acquisitions in speech in a playful fashion. I kept a series of notes on Marie G—— in this connection, extending from the third to the seventh year, and they show this unmistakably. While she lived in Giessen she mimicked the dialect of the servants and many of the peculiarities of Hessian speech, and enjoyed copying the expressions of her playmates in talking to her dolls. In one note, which records the observations of a single day, I find four distinct efforts of this kind, and for many months she adopted the rather forward manner of speaking, practised by a boy of whom she was thrown with for a while. Hardly had we become settled in Basel before she made a rhyme illustrating the local accent here.

The child's effort, on the whole, is directed toward attaining likeness to his model, whatever may be the difficulty, otherwise he would remain satisfied with his first effort when he found it understood. "Persistent imitation" constantly urges him on to improvement by repetition, constantly striving for betterment. Thus the power is gained to acquire new territory. The child's enjoyment, too, of recognition constantly furnishes him with alluring models. This progressive method is directly opposed to natural inertia and indolence, which are so strong in some children that we occasionally find them not only satisfied with slipshod

methods, but actually going back, after learning better, to the faulty pronunciation. This retrogression, too, is often playful.

We have space but for one illustration from the many which this subject affords; it relates to inventiveness in language imitation. We have already seen that the experimental play of infants (especially in reduplication) furnishes material for a science of language. The easily articulated syllables papa, mamma, baba, fafa, dada, etc., are sufficiently explained in the case of parents, who take them into their own vocabulary and thus confirm the child in their use. Many expressive words have originated in this way.[557] Darwin's child said "mum" to signify eating or wanting to eat, and Strümpell's daughter at ten months called all the birds that she saw from the window "tibu."[558] Older children, too, often indulge in such playful experimental coining of words,[559] as we shall see later. At present we are more concerned with the word building founded on acoustic imitation. Preyer thinks that the only kind of word creation practised by children is the imitation of sounds which they have heard and their repetition in the form of interjections. I quote from him: "When the listener first imitates a word and then makes independent use of it depends with normal children principally on whether much effort is made to instruct them. More important psychogenetically ... are observations on the creation of words with a special sense before the beginning of genuine speech. These are not to be regarded as mistaken, imperfect, or onomatopœic imitations,... but rather as original interjections. In all my observations and studies directed especially to their investigation, I have been able to discover nothing tending to establish a connection of the hearer's concepts with articulate sounds and syllables.... S. S. Haldemann has in his notes on the invention of words, which include a small boy's discoveries in that line, citations from Taine, Holden, myself, and others. This boy called a cow "m," a bell "tin-tin" (Holden's boy said "ling-dong-mang" for a church bell), a locomotive "tschu-tschu," the splash of something falling in water "boom," and applied the same word to throwing, striking, falling, shooting, etc., without regard to the quality of the sound, though always with reference to some sound. In weighing the fact that a sound repeated to him, such as a trumpet call, was fitted with a word suggestive of the sound seems to show that an intelligent child attempts to imitate and repeat what he hears, despite the objection of a Max Müller, and until a better hypothesis is offered affords an object lesson in the study of the origin of language."

Yet this theory is decidedly partial, for among primitive people, besides mamma, papa, adda, etc., other sounds depending on neither interjections nor imitation,

but purely the result of experimentation, get a meaning from the simple relation of mother and child, and so attain at least a place in their vocabulary and surely form one of the grounds for the explanation of the growth of language. It is not maintained that the child first learns the art of imitating sound from his elders, for without doubt he is often the originator, as in the case of mamma and papa, which he has taught them. For us the interesting question here is that of recognition which we find again the object of playful activity. The “Bow-wow” theory sounds perhaps improbable, or even ridiculous when we think of its being used by adults,[560] but when confined to children all this is changed. It works somewhat in this way: The child learns through imitation to produce all sorts of sounds—the crash of falling objects, the rumble of rolling ones, cries of animals, the gurgling of water. His mother’s play with him adds to the value of such imitations, since in their play the imitative sound comes to stand for its object just as symbolism arises from the effort to express qualities. Imitation makes this intelligible, since every copy is a symbol of the thing copied. Even the interjection and the experimental sound can only be elements of speech by imitation or repetition. Thus Jodl rightly says (following Marty) of the imitation of sound, “As soon as their power of adjustment, their reason, is sufficiently developed, they derive from free play the means consciously employed for the acquisition of varied experience.”[561] Therefore I maintain that imitation is an indispensable condition in the explanation of the origin of language, its objects being threefold: (1) All the acoustic models afforded by the environment; (2) interjectional sounds; (3) experimental sounds. It is as assured a fact that children practise the first as that they playfully repeat their own experiments. Playful imitation of interjection is not to my knowledge indulged in by very young children, but using the sound to signify the thing from which it proceeds is natural enough. On the whole, then, it seems that while imitation plays an important part in the origin of language, as many investigators testify, to make it the only factor would be an act of presumption.

As this impulse for acoustic repetition is weaker in adults than in children, I need only mention the playful use of it in poetry where it is agreeable to all. I have already had occasion to remark that poetry written for children is especially rich in such imitation. Animal cries and bird notes figure largely. Rückert’s poem Aus der Iugendheit makes use of a very common metre to imitate the whirring call of the swallow, thus:

"Wenn ich weggeh',:,:
Hab ich Kisten und Kasten voll;
Wenn ich wiederkomm',:,:
Hab ich kein Fädchen Zwir-r-n."[562]

"When I go away
I have trunks and boxes full;
When I come back again
I haven't a rag to my name."

This interpretative imitation which lends to unintelligible sounds a special meaning is applied to other things than animal cries, such as the clatter of arms, the ringing of bells, the splashing of water, the roaring of wind, etc. For adults it is expressed in the refrain, which, however, does not as a rule convey any special meaning. A rather crude form of it is found in Bürger's Leonore. A more subtile use of it is illustrated in efforts to make the sound of the words convey a faint resemblance to the acoustic effect which is being described. A familiar and celebrated instance of this is found in this passage from Faust:

"Und wenn der Sturm im Walde braust und knarrt,
Die Riesenfichte stürzend Nachbaräste
Und Nachbarstämme quetschend niederstreift,
Und ihrem Fall dumpf hohl der Hügel donnert...."[563]

Music, too, is notably richer in imitation of the latter sort than in the much less valuable tone-painting. As we have, however, touched on its analogy with and relation to speech movements, which is its most important feature, the subject will not be opened further here.

2. *Dramatic Imitation in Play*

In the playful imitation which we have considered up to this point, illusion was as a rule not involved, of the kind which seems to convert the copy into the original. In dramatic or imitative play involving the reproduction of actions it is almost invariably present, and essentially differentiates such play. Imitation is still the foundation and also the source of pleasure not only in the feeling of emulation, but in putting one's self in the place of another, in the play of imagination and in the enjoyment of æsthetic effect. There can be no doubt that this refinement of the process by which the external act of imitation becomes at the same time inward sympathy is of great importance to human progress. Konrad Lange has shown in his stimulating article[564] that with the higher animals at least, play without the contributory zest of illusion or conscious self-deception would probably be much less attractive and consequently fail of its

biological purpose, since this feature of it contributes essentially to the advance of intelligence. Even when the child merely copies for the sake of copying he learns an astonishing amount, and acquires a host of psychic adaptations. But mental elasticity, adaptability, and mobility are first acquired when the migratory instincts of the soul, so to speak, are awakened, and the child enters into the life of his model. Veritable participation in the mental states of another individual, objective appraisal of what he feels and strives for, would scarcely be possible without such practice.

In the dramatic imitative play of children important distinctions are apparent which are not noticeable in the dramatic art of adults. The play may be so conducted that the player's own body appears as the exclusive object of the mimic production, or in such a manner that the pretended object serves, either on the ground of an actual resemblance or by sheer force of imagination, as a substitute for the thing represented, or, lastly, in a way that includes both. We have an instance of the first when the boy pretends to be a soldier, of the second when he marches his tin soldiers to battle, and of the third when he himself takes part in the combat, or when a little girl plays that her doll is a real baby and she herself the mother. Since we have reason to believe that dramatic art has developed from the play of children by way of the mimic dance we may be sure that its progress has been selective, and that there is good reason for the perfection of the first of these forms. The second, indeed, appears in the marionette farces which are still much enjoyed by the uneducated classes among ourselves and are in great favour in the East. The third kind, in which the player places himself in direct dramatic relation with the puppet (taking the word in its widest sense), has no analogy in our art, but is most prominent in the fetich cult. And the reason why is easily traced. A fundamental distinction between mimic play and mimic art consists in the fact that the player imitates simply for his own amusement, the artist for the pleasure of others. His is not real play, but exhibition. Bearing this distinction in mind, we see that the third form of play is not applicable to art.

In our short review of dramatic imitative play we will not adhere too closely to the three distinctions, but simply inquire what it is that the child imitates. And first we glance at the strange fact that his impersonating impulse extends even to inanimate objects; the child acts without any feeling of limitation, like the labourers in Midsummer-Night's Dream, who were ready to take the part of the Wall or the Moon indifferently. During a long and complicated play some child will be a door post, a tree, a seat, a wagon, and a locomotive, and endeavour by his motions and carriage to support these bold illusions. This exhibition of

versatility on the part of the child is interesting in its analogy to the expansion of the imitative impulse in æsthetic perception. Such external personification of lifeless objects corresponds to inner imitation which is itself a kind of personifying. A higher object of dramatic imitation is found in the actions of animals which, as we have seen, are apt to lead to strongly marked comic effects. They are a source of the liveliest amusement to children, who will crawl like a snake, grunt like a pig, fly like a bird, swim like a fish, seize and devour prey, make grimaces, wear animal masks, make shadow pictures, notice and laugh at animals, and perhaps even mimic their movements.[565] This last propensity has given name and character to many complicated traditional games, such as "Cat and Mouse," "Wolf im Garten," "Fox Chase," "Hen and Hawk," "Fox and Chickens," etc. This manifestation of the child's deep interest in the animal world is analogous to animal imitation in primitive art and animal veneration in primitive religion. In the former connection the animal dance is most conspicuous, being extremely widespread. Masks representing the different animals are commonly worn, and the movements of domestic animals, especially the dog, as well as of wild beasts, are reproduced in rhythmic order,[566] nor are the dancers daunted by swimming and flying. Probably the masking in Greek and Japanese dances is attributable to such an origin, as also the unnaturally placed tails on ancient figures of fauns, for in these dances animal tails were hung in the belt.[567]

Hall and Allin, in their valuable treatise so frequently cited, attempt to assign a reason for the very special interest which children take in animals. They find my practice and preparation theory in this case "obviously wrong." As a partial explanation they develop the view that use of a rudiment produces to a certain degree its atrophy, and that consequently childish imitation of animals "marks the harmless development of rudimentary animal instincts as they pass to their needed maximal growth, till the next higher powers that control and subordinate them are unfolded, thus recapitulating with immense rapidity a very long stage in the evolution of the human out of the animal psyche."[568] It strikes me that this is one of the numerous cases of the too bold application of the seductive but dangerous phylogenetic theory. Entirely apart from the fact that the idea of weakening as a result of practice seems improbable in regard to the imitation of animals as well as in the catharsis theory on which the author seems to base his, it is noteworthy that the child has to make an effort to reproduce the movements, actions, and calls of animals, and this at a time when it has already progressed very far in the acquirement of human capabilities. Therefore, I am unable to subscribe to the theory advanced by these gentlemen. None will deny that the

imitative impulse is of great biological importance as practice, and I do not see that any special explanation is needed for its extension to animal actions. If, however, such explanation is required, my theory readily supplies it, for few things are more useful to primitive man than a thorough knowledge of animal life, and playful imitation afforded a much surer means of acquiring this than did mere receptive observation.

We now pass to human activities which are chosen as models by children still more than are the activities of animals. It may be stated in general that there is scarcely anything which engages the energy of man which is not made the object of childish imitation. Children of savages naturally have a much smaller *répertoire* than those of civilized people, but as far as the fact of imitation is concerned, and as it appears in child's play, it usually strikes travellers most forcibly, since they are not as a rule alive to the less salient phenomena of experimentation. Livingstone says that in central Africa it is remarkable how few playthings the children have; their life seems to be already a serious one, and their only amusement consists in imitating their elders while they build huts, lay out gardens, or make bows, arrows, shields, and spears. In other places, he says, giving a beautiful instance of childish invention and illusion, many bright children are found who have plenty of attractive toys. They shoot birds with their little bows, and teach captive ones to sing. They are very skilful in setting traps and snares for small birds, as in the preparation and spreading of birdlime. The boys make toy guns out of reeds and shoot grasshoppers.[569] Many other witnesses confirm all this, though their reports are usually less full and lucid, and we may conclude that the games and sports of adults are also early acquired by the children by means of imitation. Among the "wild men" exhibited in Europe, quite small children are often found who perform the dances of their elders with astonishing accuracy, and travellers tell us that they do the same thing in their homes. Captain Jacobsen once attended a regular Indian child's party, for which the little people painted their faces and stuck feathers in their hair in regulation style. "It was really comical to see little tots of three and four gotten up in this fashion and dancing about with leaps and bounds while older ones beat the wooden drum."[570] Children of civilized peoples still retain among their plays many heathenish customs which have not been practised by adults within the memory of man. An interesting example will accomplish the transition from savagery, dealing as it does with the powerful influence of the imitation of the uncultured on European children. Signe Rink tells of her childhood spent in Greenland: "Like all European children in the country my brothers and sisters and I had a genuine passion for everything pertaining to Greenland; and

accordingly, as soon as the door was shut on our elders we tried in every possible way and by all sorts of mimicry to identify ourselves with our playmates. My brother got himself up as a seal hunter from head to foot, and I became an Eskimo woman with waddling gait, who was sternly forbidden to leave the house." And of her play in an Eskimo hut and with a Greenlandic girl she gives the following delightful description: "We took off our shoes and sat on the warm, comfortable, half-dark part of the couch behind the backs of the grown people. Wherever I was there was Anna, my best friend among the Greenland children.... We made quite free with pincushions, dishes, and timepieces! We brought mussel shells and bleached seal bones and made a playhouse in the corner. We took cushions from the great pile and made beds for the puppies. We made mural decorations from coloured chips. Over our heads hung boots, hose, skins, trousers, and *timiaks* (under-jackets) to dry in the warmth of the lamp or to be out of the way. All these surroundings formed elements in our play. In imagination we had sent our husbands off on a seal hunt, and with thimbles on our first fingers, the Greenland custom, we sewed round flaps for the boot soles of the absent ones."[571] One can not read such a description as this without being impressed with the incalculable influence of imitation on the whole psychic life of the child, not only in relation to externals, but also as affecting their deeply rooted sympathies and antipathies, habits and convictions, all of which are deeply influential on the developing character. Baldwin says: "It is not only likely—it is inevitable—that he makes up his personality, under limitation of heredity by imitation, out of the 'copy' set in the actions, temper, emotions of the people who build around him the social inclosure of his childhood. It is only necessary to watch a two-year-old closely to see what members of the family are giving him his personal 'copy'—to find out whether he sees his mother constantly and his father seldom; whether he plays much with other children, and what their dispositions are to a degree; whether he is growing to be a person of subjection, equality, or tyranny; whether he is assimilating the elements of some low, unorganized social content from his foreign nurse. For, in Leibnitz's phrase, the boy or girl is a social monad, a little world, which reflects the whole system of influences coming to stir its sensibilities. And just as far as his sensibilities are stirred he imitates, and forms habits of imitating. And habits?—they are character."[572]

There is hardly any limit to the rôle playing of civilized children. Under normal conditions they naturally take their own parents as models, and even in societies not governed by caste considerations this must have a conservative influence. But the occupations of others, too, appeal strongly to the imitative impulse, and

it is altogether probable that such tests of various possibilities often exert an influence on the later choice of a life's calling, for play develops predispositions and antipathies. When Schiller was eight or nine years old he was taken to see the magnificent ducal opera house in Ludwigsburg, and was forthwith inspired to produce a similar work; so he built a little theatre of books, and had paper figures to act in it. Soon afterward he got up private theatricals among his sisters and schoolmates. His enjoyment of preaching, too, was shown in his being able, like young Fichte, to repeat, when a child, whole sermons verbatim whose lofty spiritual pathos confirmed his natural inclination toward the priestly calling.

Before proceeding to the consideration of special forms of the imitative impulse, I will make a limited selection from a series of observations calculated to illustrate the variety of childish imitation. The carrier's wagon, the street car, the railroad are as well represented by his own body as by external objects, though the silver knife-rests on our table seems especially adapted for the last, being hitched together and pushed about the table, passing through tunnels, stopping at stations, etc. An old servant who comes to our house daily to see if anything is wanted from the library or post office, regularly gets letters which the child has placed in old envelopes. Another play is for the child to knock at the front door and say to the maid who opens it, "I am an old letter carrier." When asked if she has any letters she answers, "Here is some money for you," and spits in the girl's hand. She comes with a pile of old papers, and asks if we want to buy one. She travels to Coburg between the house and garden, and visits a friend, saying, when she comes back, "I have told Emmy that she must come here soon." For months after a visit to a swimming pool she practises swimming in the garden; standing on a chair holding her nose she jumps in the grass, where she tries to copy the movements of swimmers. She said, when five years old, to her doll: "Lisa, in an hour you go to Frau Schneider, and when she asks you, 'What is, the sky is blue?' you must say, 'Le ciel est bleu'; and when she asks, 'What is, the tree is green?' you must say, 'L'arbre est vert.'" At six and a half she gave her doll writing and piano lessons. In the latter she grasped the doll so that by means of pressure on the hidden mechanism she elicited from it accompanying wails, at regular intervals and in good time.

The capacity for illusion is always the most interesting feature of such play. The same child varies greatly in this respect: sometimes he seems entirely given up to self-deception; he will offer you a meal of candy in which one bit represents the meat, another the vegetables, etc., and is quite hurt if you are guilty of confusing these dishes. Sometimes, too, when he has concocted various dainties out of mud, he can not resist the temptation to bite into the brown mass, although

in his calmer moments he well knows that mud is not edible. On the other hand, the waking consciousness seems to be unshaken through it all. If you warn the playing child not to hurt his rocking horse, he will answer that it is only a wooden horse, without, however, abating his zeal in the play. Then, again, the whole thing is laid out beforehand, as in this case. Marie: “Then let’s play that I am a thief, and there is a whole roomful of cakes, and the door is shut, and I cut a hole in it and take all the cakes away, and you are the policeman and run after me and get all the cakes back again.” Frieda: “And I will take them to my child. Or shall we play birthday?” When choice is thus offered between various possibilities there is, of course, much variation in the strength of the illusion, and the sudden transitions of the imagination are often very striking. For instance, one small dramatist called two combs which he held together a biscuit, and said it had an excellent taste, and the next moment was rocking them to sleep with tender solicitude. We have already noticed the child’s extraordinary capacity for supplying any deficiencies in the object of his fantasy; he has no difficulty in accepting two upright pencils as towers, an umbrella for a baby, with grass stalks attached to it for flowing locks.

At the risk of giving too much space to this phase of the subject I will describe a baptismal festival in 1896, which was participated in by half a dozen children from five to fourteen years old, at our house. For the adults chairs were provided and placed in regular rows, and they were required to bring tickets of admission which a duly accredited doorkeeper received. All the children were deeply affected during the official parts of the ceremony, especially the young mother, who showed as she brought the doll infant forward a really pallid face, and the fourteen-year-old minister was so moved by his solemn office that he lost his place after the first sentence. On the certificate of baptism was the proverb:

> “Ihm ruhen noch im Zeitenschoose
> Die schwarzen und die heitern Loose”;[573]

and the programme, whose second part seems to throw some doubt on the lofty idealism of the children, was as follows:

PROGRAMME

FOR THE CHRISTENING OF ILSE, ELIZABETH, AND ERIKA BÖHME

I. Baptism.
  1. Sermon.
II. Lunch.
  First course, pastry.
  Second course, ham and asparagus.
  Third course, fish and potatoes.

Fourth course, tongue and cabbage.
Fifth course, beefsteak with sauce.
Sixth course, poultry and salad.
Seventh course, roast pork and chestnuts.
Eight course, venison and compote.
Ninth course, pies.
Tenth course, ices.
Eleventh course, cheese and pumpernickel.

III. CONCLUSION.

1. Conversation.
2. Games.
3. Domino party.
4. Dancing.

Amid the bewildering variety of childish dramatic play two specialized groups seem to be particularly prominent. As stated in the general introduction the imitative impulse is often aroused by an intensive stimulus calculated to call into play other stimuli as well, one of the most prominent being the fighting instinct —playful imitations of all sorts of contests—as vigorously practised by boys, for, however much education may be said to foster it, their inborn nature sets the pace. The old story of Achilles's choice of a sword, though he had been brought up like a girl, is well founded. Among savages the chase and manly contests are the constant models for playing boys, while among ourselves, besides playing soldier, many such sports are kept alive solely through tradition. This is the case, too, with less cultured peoples, the bow and arrow being used as toys long after they are abandoned for serious warfare.[574] Since so many of these plays have been enumerated with the other fighting plays, I will not here single them out, but rather confine myself to a notable example from ethnology. Just as our children chase each other, take prisoners and execute them, so do the little ones of the Seram Islands play at decapitation. "A favourite game of young and old," says Joest, "is that of cutting off heads, for which the children are armed with light wooden swords. A cocoanut is hidden in the shrubbery, and their naked bodies wind like snakes through the grass and thicket in search of it. An arrow or lance is hurled into the air when the nut is found, and a couple of well-directed blows with the sword sends it bounding away, severed from its stem. The victor, holding his booty in his left hand and exulting in his triumph, runs off at a gallop, pursued by the entire crowd, shouting and brandishing their weapons."[575]

The nursing or fostering instinct which is so prominent in the imitative play of little girls deserves more attention. A special section is devoted to such play among animals in my former work, but I admit that I am myself somewhat sceptical in regard to some of the examples quoted there, though I was most careful to get the testimony of trustworthy investigators. Among animals,

moreover, some sorts of nursing play are wanting, such, for instance, as that in which a lifeless object is treated as a veritable infant.[576] The feeding of young birds of a second brood by their older brothers and sisters seems to me entitled to be called a nursing play, and Naumann observed this in the case of water wagtails. Altum reports the same behaviour by canary birds, and vouches for having seen young water wagtails who were still wearing their first feathers feed young cuckoos.[577] That this is a play can scarcely be questioned, and it must be imitative since the parent birds are taken as models, but whether it is dramatic illusion play is another question and a doubtful one, for there is always actual feeding with actual food; not, as with children, a mere pretence. Yet I am very doubtful whether there would be any nursing plays among children without parental models, and for that reason it has been included among imitative plays in this book instead of being given a separate section. We then conclude that the maternal instinct is present in little girls, but first attains expression in play on the rise of the imitative impulse.

We have a direct analogue to the bird examples when an older child assumes the rôle of mother to a younger with purely playful and imitative motives. Dramatic illusion first comes in when sham activity is involved, as may be the case with dolls, other children, or even adults as the subjects. We must conclude, then, that the imitative impulse is fully developed only when imagination supplements the copy. Baldwin gives a particularly pretty instance of dramatic nursing play where the older sister takes the part of mother to the younger.[578]

As regards the use of dolls it would be interesting to know whether the child would of its own accord so treat any beloved object if it had never seen a real doll made by adults, but the artificial doll is always provided so early that there is no opportunity to make the experiment. In the slums of a great city a proper subject might perhaps be found. However, we know that the child’s powers of illusion are amazing. A cushion, a stick, a building block, an umbrella, a dust brush, or a footstool, a table cover, a slipper, a fork, in short, anything portable, is liable to become a beloved and zealously nurtured baby, and every detail is quickly arranged to suit the picture.[579] Finally, a few words as to the origin of this toy. Its use is well-nigh universal, and one of the sights most worth seeing in an ethnological museum is a collection of dolls from all over the world. They are made of clay, of edible earth, of wax, of wood, of bark, of cloth, of porcelain, etc., and imitations of the human figure blend with those of animals, of household furniture and utensils, of arms and implements of different sorts in motley variety.[580] They serve to illustrate human progress. In mediæval Europe,

in ancient Rome, in Greece—everywhere the doll was at home. The old museum in Berlin, for example, possesses a wooden doll from the Egyptian excavations, which has movable legs, and a crocodile whose jaws can open and shut. Since these images of men and animals were probably the earliest form of toys, the conclusion is natural that they probably originated with idols which from religious feeling may have lain in the cradles and thus appealed to the children as playthings. Other customs and the testimony of travellers give colour to this idea, though it is difficult to draw the line between the idol and the doll.[581] Through the kindness of my former colleague, Sticker, at Giessen, I myself own an old Indian wooden doll, which appears suited to be both a protection from evil spirits and a toy for children. Still, we must not allow to pass unchallenged any manifestation of the disposition which used to be so common, to refer everything to a religious origin. It is quite possible that simple pleasure in plastic representation for its own sake is responsible for the manufacture of these toys. Von den Steinen tells us, "Dolls a span long, made of straw, served as children's toys, and were also stuck in a pole on the roof of their places of festivity as a sign that some frolic was in progress, and everybody spread the news."[582] There is nothing here to hint at a religious significance.

Of dramatic imitation play by adults we find only a few remnants among civilized people, aside from mimicry on the one hand and the borders of art on the other, where imitation is not exhibited as an end in itself, but rather in relation to its effect on the spectators, and therefore is no longer a genuine play. Professional actors "play" only in particularly happy hours. The case is quite otherwise, however, with savages, whose imitative dances, while conducted in the presence of spectators, it is true, are unmistakably for the enjoyment of the participants first, somewhat as are our amateur theatricals. We have already described animal and erotic dances, which are also imitative, of course, and all interesting, comic, and exciting elements of their life are repeated in various dramatic dances, fighting scenes being favourite subjects. I choose an example whose details most strongly recall the capacity for illusion possessed by children. It is a woman's dance which K. Semper saw in the Palau Islands: "We could already hear the rustling of their leafy garments, which swung in time with the dancers' movements as they stood in a long row. Their aprons were of the briefest, their naked bodies were fantastically painted in gay colours. In one hand they carried short wooden instruments which seemed to be weapons, and in the other a staff covered with a skilfully made tuft of white shavings, tipped with red. They marched in a row on to the raised platform whose roof sheltered them from the sun, and now the dance began. The beginner sang a verse without

moving, then all repeated it as a chorus with accompanying rustling of the leafy gowns and beckoning movements of the arms. Soon they became more active, and apparently wished to express joy and greeting. Each seized her wooden instrument—a neighbour told me that they represented weapons—and made light swinging movements before her. During this war dance they gradually removed from the starting point. A sudden loud cry, wild movements of the arms and whole body, excited singing and blazing eyes betokened the expectation of approaching battle.... The dancers' movements became wilder, they stamped their feet, their hands dealt blows in time with the song—here to strike a fallen foe, there to sever a head. At last victory is won. They grasp the wands bearing the gay tufts and raise them aloft, then lower them diagonally to the ground. 'What does that mean, Frau Ebadul?' I ask. 'That is the battle of the Inglises against Aibukit, whom they are besieging; now they are firing the villages—the yellow tufts are flames to light the huts with.'" Aside from the rhythmical movement which is needed to complete the power of illusion for adults, this is very like the dramatic imitative play of children.

3. *Plastic or Constructive Imitative Play*

Under this heading are grouped external representations of two or three dimensions, thus including drawing as well as the moulding commonly understood as plastic. Here it is more difficult to distinguish between play and art than in dramatic imitation, since, while the child nursing her doll, or putting his tin soldiers through a drill, thinks not at all of spectators, and how they will be affected; even an infant artist is always eager to show what he can do. It can, however, be generally previsedthat pictorial imitation is a play only when pure joy in the act of production fills the soul of the copyist.

I begin with imitative drawing, which seems to be widely practised, not only by children but by primitive people as well, and will therefore claim most of our attention. Its origin is not clearly determined, though von den Steinen's observations make out the case pretty clearly for their connection with language of gesture. "The simplest drawings," he says, "are those connected with gesture. When a savage repeats the cry of an animal in one of his spirited dramatic tales and wishes to make the effect more forcible, he also imitates the creature's bearing, gait, and movements, and pictures special peculiarities, such as long ears, trunk, horns, etc., in the air with his hand. Such actions for the eye form a parallel to the voice imitation for the ear, but when they still do not suffice, drawings are made on the sand. In the absence of word equivalents for

communicating with them I myself have often taken refuge in such sand writing."[583] He goes on to say that he thinks, although his observation has been confined to Indian tribes, the further development of drawing followed for the purposes of communication after the idea of making pictures was once grasped; and that finally they were made without such practical aim, efforts were made to improve the technique, and all sorts of natural objects were represented in interesting and novel aspects.[584]

I know of nothing that should hinder us from accepting this luminous explanation and applying it to the origin of all drawing but for one point, which does offer some difficulty. That a primitive hunter should imitate animal bearing, gait, and movement is easily accounted for by the instinct for dramatic imitation, but it takes us no nearer to our goal; and, moreover, how does it happen that he adds the outline of ears, trunk, or horns in the air to complete the picture? On this point the whole question depends. Would this mode of suggesting contour ever occur to a man who had never seen drawing? Does not the former presuppose the latter, instead of accounting for it? I do not presume to judge of the force of this objection, but feel that we can not afford to ignore it. If it is a just one, von den Steinen's explanation of course falls to the ground, and there is apparently nothing left but to refer the whole subject to playful experimentation. In this case we would best proceed from the sand drawing, since it is probable that the child or adult playfully marking on the sand accidentally produces some semblance to a natural object and adopts it as his own. Thus the child observed by Miss Shinn accidentally produced (110th week) a triangle in the midst of aimless scribbling, and repeated it afterward with conscious intent.[585] While absolute certainty is unattainable in such instances, it would still be valuable to make observations on a child who had never seen a pencil used for drawing or writing. Should such a one go on from scribbling to drawing, our play idea would receive valuable confirmation.

Another question is how far drawing, however acquired, may be regarded as a play. The finished production of the artist's pencil is not always so, by any means, for in modern times his art requires all a man's energies, and becomes his life calling and his means of support. Productions of dilettantes belong more to our sphere. But how is it with primitive folk? Here, too, the play idea is often excluded, for the reason that their drawings serve religious purposes, or are used as picture writing; yet, according to the views of recent ethnologists, it would be misleading to refer such drawing exclusively to these ends. "We are convinced," says Grosse, "that in the drawings of savage people, with comparatively few

exceptions, neither a religious nor any other serious purpose is involved. We are perfectly right in trusting the numerous witnesses who assure us that such drawings are made simply for the pleasure of making them."[586] This establishes the pre-eminently playful character of primitive drawing and sculpture, and the efforts of children are still more obviously so. Imitative and imaginative play here join hands, the former making the point of departure while the expanding and illuminating power of the latter is needed to complete the satisfaction in the finished product.

As I am unfortunately unable to go into details,[587] I close the subject with some general remarks on the character of such drawing. For the child and for the savage the chief object of representation is one of the most difficult of all, namely, living animals. Miss Shinn's niece, who began with mathematical figures, is an exception accounted for by the fact that she was intentionally directed toward abstract form. Even the geometrical patterns in primitive ornamentation may often be traced to the imitation of animals, and a distinction between the work of these people and that of children lies in the fact that they prefer such figures while children incline to the human figure, which is rarely represented by savages. The explanation of this is that for the hunter the animals which he pursues form the chief objects of his imagination, as any sportsman among ourselves who begins to draw will illustrate. A third view is presented when we ask what is the psychological antecedent of imitation. In civilized art it is as a rule conscious perception of the actual object, as genuine artists rarely paint from memory. But it is quite otherwise with children; they object to drawing from Nature, as H. T. Lukens points out.[588] They prefer to make the absent present by their art, and their passion for drawing is considerably dampened by the practice in observation which school discipline requires. The child's model is commonly a mental image, a fact which explains many of his particularities. The savage, too, from what we know of his art, seems to produce it not directly from the object, but from his impression of it, and thus it happens that he represents effects of things which are not visible to the beholder now, though they may have been elements of the scene which he recollects, and explains, too, in part his almost incredible errors in proportion and in the relative position of things, such as placing the mustache of a European above the eyes, or even on top of the head.[589] This suggests the distinction which Grosse makes between childish and primitive art. He thinks it strange that the two are even considered to be on a par, since children seldom show a trace of the hunter's close observation. The art of savages is, as a rule, naturalistic, that of children symbolic; the only actual resemblance being the lack of perspective in both. This

view certainly contains an important germ of truth, but the statement is extreme. It is true that many drawings of primitive man display a remarkable truth to Nature, impossible to a child, and, as Grosse rightly says, resulting from trained powers of observation joined to the dexterity acquired in the manipulation of weapons and tools. But this wider knowledge and greater skill seem to me to be the sole grounds of difference, and the sharp distinction of naturalistic and symbolic unwarranted. Of course, drawing is in itself to a great degree symbolic, but the symbolism displayed by children, surprising as it often is, does not betoken any special preference for symbolism, but often results partly from incapacity and partly from the exigencies of the subject being represented. When full representation is unattainable they are satisfied to make their meaning intelligible, and savages, too, often resort to similar expedients. Grosse himself gives us some Australian drawings on wood where the human face is represented without a mouth, just as often happens in childish efforts. In these figures the fingers are symbolized by mere lines. In his valuable chapter on drawing among the Bakaïri, von den Steinen points out still closer analogy with children's work. He says, for example, that, as a rule, only three fingers and toes are indicated, to serve as a suggestion for the rest. It seems to me that it is then rather a question of more or less than any real difference.

Our next topic is the question of beauty, and here, too, the child and the savage are close parallels. Both have a certain interest in the introduction of colour which appeals to them, both object to carrying out the full type, both probably draw from memory, and both lack almost totally the appreciation of beautiful form. The savage, indeed, does introduce the simpler elements of beautiful form in his ornamentation, but in his representations of human and animal figures there is little effort to preserve such outlines. This bears out our former conclusion that savages have little appreciation for physical beauty as such, and with children it is much the same. Some children, it is true, make a general distinction between people who are beautiful and those who are ugly, but in drawing not only the ability but often the intention as well is wanting, to produce beautiful faces. When they do attempt something definite in the way of expression it is much more likely to be caricature of homeliness than beauty. It is known also that this tendency is especially displayed in periods of highly developed art, and more particularly by the Germans.

A final observation refers to children alone. I have already noted that imitative play, in which the player appears in dramatic relation to the puppet, while common enough with children, is not found in adult art unless at the most a partial analogy is traceable in some religious connections; these same principles

apply to drawing. The child plays with the figures he has drawn as with dolls, and gives us a most attractive picture of his capacity for illusion. Marie G——, when four and a half years old, wanted to draw a holy family. First came a kneeling figure, whose position was most precarious—his knees would not bend properly, and for reverently folded hands there was a confusion of crossing lines. The little artist cried with annoyance: “The naughty child doesn’t want to kneel. Joseph will be angry with him because he won’t kneel down and say his prayers; he is stamping and scolding.—You naughty child, won’t you kneel down now and pray?” In the meantime she made Joseph (asking if he wore trousers), with his foot raised to stamp on the ground, and then came the kneeling figure—a good child now, at last. A little of this capacity for illusion is sometimes found among full-grown artists, and especially among the naïve religious painters who are conscious of the divine indwelling as they make their representations of religious subjects.

The consideration of plastic imitative play in its narrower sense will occupy us but a short time. Von den Steinen’s explanation of drawing, given above, will hardly apply here. The probable starting point for such figures was the accidental resemblance of some outline to weapons, implements, or ornaments. The child’s ready capacity for illusion which is as likely to call a circular outline an umbrella as a human head is not wanting in adults as well, and especially so among primitive people. When he makes a dagger handle out of a reindeer horn, or a necklace of various small objects, or adorns a clay vessel with impressions, and enjoys doing these things, his hands thus rendered skilful need but little help to make other images. Another possible origin is in experimentation with plastic material, such as clay or wax, which would naturally lead to moulding.

The first hypothesis is well illustrated by von den Steinen’s description of the chain figures of the Bakaïri. He says, “As the rhyme often suggests the thought, so an outline already familiar may suggest a motive”; the meagre suggestions which satisfy savages in such cases “is evident in most of the figures which adorn their necklaces, strung between seeds, shells, and nuts. It matters not what is the material—a bit of the spiral of a rose-coloured snail shell with an irregular outline does duty as a crab; from the shell of the *Caramujo branco* (*Orthalicus melanostornus*) they cut birds and fishes;... bits of green and black mottled stone are fishes when flat and birds when rounded, and sometimes Nature is assisted in carrying out these resemblances. Fruit, too, was used which bore an accidental resemblance to some sort of bird.”[590]

But Brazilian plastic art includes the other type as well; they mould figures in

wax and in the edible clay which furnished their forefathers with food. As a man held a lump of clay in his hand the impulse may have been aroused by some accidental resemblance, and thus give rise in a purely playful manner to the custom which von den Steinen has called “only a skilful method of storing the material.... Black wax was most beautifully moulded by the Mehinakú into excellent animal forms and suspended around the neck or laid away in a basket until wanted.”[591] That this was a playful habit is proved by the maize figures of the same tribe. These were usually bird forms almost as large as turkeys, and hung from the roof on long ropes, “A strange spectacle to the traveller who thinks at once of idols or fetiches, but these fine birds are in reality nothing but well-filled ears of corn in the natural husks.”[592] We can not here go into the higher forms of primitive sculpture, but it may be mentioned in passing that even such aboriginal tribes as the Indians of central Brazil often make use of their plastic skill for symbolic decoration. Thus the Mehinakú adorn the upper end of their wooden spades with the carved head of a mud wasp, because they too dig in the ground and throw up the dirt as the Indian does with his tool.[593]

We must pass still more hurriedly over the plastic efforts of children, which are of much less importance than their drawings, though among the children of savages the disposition to attempt a rude sort of sculpture is much more common than with us. Nachtigal relates that the negro children of Runga formed rhinoceroses and elephants out of the beautiful red clay which abounds there.[594] There are individual instances of a similar kind among civilized children. Ricci has taken some trouble to make a collection of such work by Italian children, and finds it differs less from the efforts of savages than their drawing does.[595] On the whole, however, this branch of art seems to be comparatively little prized or pursued with the exception of making snow men and some caricatures in wax, dough fruits, and the fashioning in sand of gardens, streets, cities, tunnels, and forts which are all about as much imitative play as production.

In conclusion I offer a few general remarks on imitation in connection with representative art, where three forms of it can be distinguished—objective, artistic, and subjective imitation. The first consists, as we have seen, in repetition founded on sense-perception and simple memory, while the last permits considerable deviation from reality. The child and probably the savage prefers to produce from memory.

Artistic imitation may be defined as the influence of copies produced by other artists. It plays in art the same rôle as that which falls to tradition in general culture, for without it the artistic genius would have little advantage over the

gifted savage; indeed, even with him artistic imitation is of great importance. It is not alone the wish to do what others have attained; it is also the *via regia* to the higher evolution of art. A stimulating task is to trace in history how originality was won by copying. Baldwin's little girl began to build a church from blocks after a picture. When she has laid the foundation, suddenly her face lights up and she begins to depart from the model. On being reminded by her father that churches are not built in that way she answers, "Oh, no; I am making an animal with a head and a tail and four legs," and, full of pride in her new discovery, she returns to her work of art, which is no longer a church, but has been turned into an animal.[596] We see here, as in a magnifying glass, the law of progress. Not in random discharges but from real action comes the new; and the action that leads to the new is not original, but must be imitative.[597]

This imitative action must not only always have another artist's work as its model; here may enter our principle of subjective or self-imitation, which, indeed, is more a physiological than a psychological principle since it is no other than all-powerful habit in its spontaneous form, the impulse to repeat.

Children best illustrate it, but the familiar saying that genius consists in an infinite capacity for taking pains is a popular expression of the fact that progress depends on indefatigable perseverance. It is Baldwin's persistent imitation again. And self-imitation is as indispensable to progress as is the imitation of others, acting in conjunction with the law of habit, according to which the frequent use of an act tends to make it easy. The conservative principle of imitation furnishes a basis for higher development by supplying an incentive for the mechanical effort required by the first laborious accomplishment of the task, as well as for the introduction of new details and the application of effective variations. Here, too, an example from child psychology clearly shows the coupling of new with old habits. A child observed by Perez had learned to draw a locomotive, and was so charmed with the accomplishment that he did not want to draw anything else. One day his grandmother wanted him to make a portrait of her, and what did the boy do but draw a locomotive with a first-class carriage attached, and his grandmother's head protruding from one of the windows![598] In similar way the painting of landscape began in history with little pieces of background piping out of figure pictures.

4. *Inner Imitation*

The conviction has long prevailed[599] among German students of æsthetics that one of the weightiest problems of their science is offered by that familiar process

by which we put ourselves into the object observed, and thus attain a sort of inward sympathy with it. In France the same problem has been treated in a notable manner by Jouffroy, who says, “Imiter en soi l’état extérieurement manifeste de la nature vivante, c’est ressentir l’effet esthétique fondamental.”[600] In this very complicated process we can distinguish these leading characteristics: 1*a*. The mind conceives of the experience of the other individual as if it were its own. 1*b*. We live through the psychic states which a lifeless object would experience if it possessed a mental life like our own. 2*a*. We inwardly participate in the movements of an external object. 2*b*. We also conceive of the motions which a body at rest might make if the powers which we attribute to it were actual (the fluidity of form). 3. We transfer the temper, which is the result of our own inward sympathy, to the object and speak of the solemnity of the sublime, the gaiety of beauty, etc.

By including all these under the rather inadequate name of æsthetic sympathy, and bearing in mind what we learned in the review of æsthetic pleasure, we can not fall into the error of supposing that they include the whole field; yet at the same time we must see that their explanation involves not only its most difficult but also its most important problem. Why is this?

The attempt might be made to answer this question entirely in terms of the psychology of association, only we should then be forced to designate processes as associational which do not at all come under the original definition of the word—namely, processes of fusing or blending, which is not the bringing of a succession of disparate ideas into special relations, but rather a unifying process, in which the after-effect of past experience and the present perception blends to an inseparable synthesis.

I select, then, as an example, the latest utterance of Lipps on the impression produced by a Doric column, citing only those points which seem to meet our purpose. He speaks first of the mechanical method of regarding the column and then continues: “But another element follows this naturally. Mechanical events external to us are not the only things in the world. There are events lying nearer to us in every sense of the word since they take place within us; and these are similar or analogous to the external events. Moreover, we have the disposition to regard similar things from the same point of view, and this point of view is determined preferably by the nearest object. Therefore we compare what happens externally with what happens in or to ourselves and judge of it according to the analogy of our own experience.” After remarking that such a method of observation is implied in such expressions as “strength,” “aspiration,” etc., as applied to a column, Lipps goes on: “Our satisfaction is not of the general kind which applies to the universal idea of strength, effort, activity. Every mechanical event has its special character or its special manner of fulfilment. This may be easier, more untrammelled, or more difficult, and requiring the overcoming of more serious obstacles; it may require greater or less expenditure of ‘force.’ All this reminds us of our own inner processes and evokes those, not indeed identical in character, but analogous. It presents to us an image of similar effort on our own part, and with it the peculiar personal sensations which accompany the act. The mechanical event which seems to fulfil itself ‘with ease’ incites us to an equally simple and expeditious act; the violent expenditure of vigorous mechanical energy, to an exertion of our own will power, to which is added the feeling of lightness and freedom proper to a self-originated act, and in other cases the not less agreeable feeling of our own strength.” Omitting what intervenes I add the conclusion of the treatise: “From the conditions indicated there results not, indeed, the entire æsthetic impression produced by a Doric column, but a considerable part of it. The vigorous curves and spring of such a pillar afford me joy by reminding me of those qualities in myself and of the pleasure I derive from seeing them in another. I sympathize with the column’s manner of holding itself and attribute to it qualities of life because I recognise in it proportions and other relations agreeable to me. Thus all enjoyment of form, and indeed all æsthetic enjoyment whatsoever, resolves itself into an agreeable feeling of sympathy.”[601] Here we encounter the difficulty mentioned above. It is evident from these extracts that this is a case of successive associations. We are “reminded” of similar subjective processes, and the “idea” of similar acts of our own is “evoked,” be they facile or strenuous. But successive associations are not available as an element in æsthetic

enjoyment, as Lipps[602] goes on to say: “Moreover, all this takes place without reflection. Just as we do not first see the pillar and subsequently work out its mechanical interpretation, so the second, personal interpretation, can not be said to follow the other. The being of the column, as I perceive it, is necessitated by mechanical causes which themselves appear to me to be from the standpoint of human action.”[603] Then we have not a true image of our own deeds before us; we are not actually “reminded,” for the process is one of simultaneous fusion, in which the consequences of earlier experience unite with sense-perception to effect a direct harmony. From this direct blending at the instant of perception we see why, to the observer, the pillar seems to hold itself “as I do when I brace myself and stand up straight.”

Assuming that this simple presentation of the psychology of inner sympathy furnishes the elements of an explanation, still, in my opinion, the state of æsthetic enjoyment is not yet sufficiently accounted for. The fusion processes described form part of a general psychological fact, and it is impossible to complete an act of apperception without such synthesis. The question must be answered as to how æsthetic perception is differentiated as a particular satisfaction from general apperception; and the answer brings us directly to the idea of play. Take thunder, for example. On the ground of the synthetic process, its roar makes, universally and naturally, the impression of a mighty voice raised in anger. The child has that impression when it frightens him; so has the savage man when he regards it with religious awe. But neither feeling is on that account æsthetic; that comes only when the hearer enjoys the emotional effect of the phenomenon as such, rendered possible by the process of fusion; when he has an independent, self-centred pleasure in this result—that is to say, when he plays. The same remarks apply to the column. It is self-evident that we can not think of its upward spring without calling in our earlier experiences, but it seems to me to be just as apparent that in æsthetic perception the impression is intentionally lingered over only for the sake of its pleasure-giving qualities, i. e., playfully.

Further, I think it is certain that there is in the play of æsthetic enjoyment a condition of consciousness analogous to that underlying a special class of plays —namely, the experimental. The force of this analogy has impelled various students of various lands, independently of one another, to this common goal. It is, of course, only a relationship of conditions of consciousness, not genuine identity; but we may affirm this much—namely, that inner sympathy is at least as closely connected with dramatic imitation as the latter is with plastic imitation. If the dramatic begins with a mere motor reaction, which tends more and more to identify itself with self-transference into the condition of another

being, then inner imitation appears as but a further step toward spiritualizing the imitative impulse. When, therefore, I designate æsthetic sympathy as a play of inner imitation I believe I have correctly characterized the psychic attitude of æsthetic enjoyment as far as it is based on the fusion processes.

But I must go a step further. So far we have had in mind only past acts and their effects as the psychological precedent of such sympathy, and herein lies, in my opinion, the inadequacy of the whole associative method. The sympathy of an æsthetic nature possesses such warmth and intimacy, and such progressive force, that the effects of former experience, however indispensable, are not sufficient, as Volkelt, Dilthey, Th. Ziegler, and A. Biese have justly remarked. Mere echoes of the past can not bring about what I understand as the play of inner imitation. On the strength of my experience I hold fast to inner imitation as an actuality, and one connected with motor processes, which bring it into much closer touch with external imitation than the foregoing dissertation would indicate. I have intentionally made use of the qualifications “in my opinion,” “in my experience,” etc. For, theoretically at least, I must admit the possibility that persons may exist for whom æsthetic enjoyment does not get beyond the stage here indicated. All that follows relates to those only in whose æsthetic pleasures motor accompaniments are apparent, whether subjects of consciousness or inaccessible to the self-examiner.

In attempting to develop the main points of this fuller conception of inner imitation, I first take up the analogy between the child’s dramatic imitation and æsthetic sympathy.[604] The child playing with a doll raises the lifeless thing temporarily to the place of a symbol of life. He lends the doll his own-soul whenever he answers a question for it; he lends to it his feelings, conceptions, and aspirations; he gives to it the pretence of mobility by posing it in a manner that implies movement, or by his simple fiat when he asserts that it has nodded, or beckoned, or opened its mouth. Here the resemblance to æsthetic sympathy is already strong, and is still further augmented by the use of the child’s own body as the instrument of his mimic play. His attitudes and positions are then symbolic. The boy who with the paltry aid of a paper helmet and a stick to stride can identify himself with the cavalry officer whom he imitates has the soul of a fighter. And he can extend this power of symbolic imitation to inanimate things as well; kneeling with his hands on the floor, he is a bench which easily turns into a locomotive as soon as forward motion and the puffing sound suggest it. We have here illustrated the power of illusion to convert a mere symbol into the thing symbolized, entering fully into the pretence and yet not confusing itself with reality, just as in æsthetic sympathy. Thus imitation proves itself to be the

author of the symbol.

This external imitation proclaims the inner. What, then, constitutes the difference between the two, and how are we to define inner imitation in the fuller sense in which it is used here? We have seen that external imitation is at the same time inner sympathy, and the external bodily movements are chiefly directed toward furtherance of this and of the transference of self which accompanies it. But how is it when external visible imitative movements are wanting? Is inner sympathy to be conceived of as merely a brain process in which only the recollection of past movements, attitudes, etc., is blended with sense perception? By no means. There is still activity, and that in the common sense of the word as it relates to motor processes. It is manifested in various movements whose imitative character may not be perceptible to others. In this instantaneous perception of the movements actually in progress I find the central fact with which blend, on the one hand, imitation of past experiences, and on the other the perceptions of sense.

Inquiry concerning the complex movements of inner imitation is not yet past its opening stages, but so much seems to be established—namely, that by it are called forth movement and postural sensations (especially those of equilibrium), light muscular innervation, together with visual and respiratory movement, all of which are of great importance. Movements of the eyes have been given special attention by R. Vischer,[605] sensations of rest by Couturat.[606] Wundt has made eye movements of general psychological interest, and S. Stricker[607] has attempted to do the same for the muscular sensations called forth by the central impulses (at the present stage, including principally tactile sensations of the skin, as well as muscular and joint sensations). Intensely interesting is the article by Vernon Lee and Anstruther-Thomson on beauty and its contrary,[608] which quotes a number of observers who, as much from practice as from the possession of exceptional gifts, far transcend the limits attained by the average man in self-observation. Couturat and Stricker advance the idea that such movement processes, so far as they depend on mild muscular contraction, are due to the imitative impulse.

Before adducing some examples, I must venture on one more observation. It is not, of course, to be assumed that such external movements are necessarily genuine copies of sense-perceptions. In the psychological treatment of eye movements, for example, sufficient caution has not been exercised, and consequently a false standard has arisen, transcending the facts. Here we shall find a comparison with external dramatic imitation play of great value, bearing

in mind that the result of the latter is a symbol, not a counterpart. When a boy has to cut off his comrade's head in dramatic play, a very soft blow with a stick is sufficient to indicate execution with the sword of justice, and in the same way and degree the movement of which we are speaking may be symbolic. Suppose a man fancying a huge spiral imprinted on the wall in front of him. If he remembers the motor processes he can reproduce them at will; little movements of the eyes, little tensions of the neck muscles and in the throat, together with breathing movements, are useful and (at least in my own case) even indispensable, and yet there is no really spiral motion—the symbol is sufficient.[609]

I now present a few examples. First, as regards the optical perception of movement. "When I am in good physical condition," says Stricker, "and take my stand at some distance from an exercise ground so that I can watch the company with ease but not catch the word of command, I feel certain muscular sensations quite as strongly as if I stood under the command and attempted to follow it. When the troop marches, I keep time with them in the sensations of my lower limbs; when they go through the arm exercise, I have quite intense muscular feelings in my upper arm; when they turn, I feel the same in my back." (B) The following passage shows that the same individual can experience also other symbolic sensations of movement: "From the exercise ground I went to the theatre to see the gymnasts, and first watched one using a springboard. At the moment when he leaped from it I had a distinct sensation in my chest, and the feeling, too, of motion in the muscles of my eyes."[610] In poetic art inner imitation of movements must also be given due weight.[611] Lessing's requirements for a poet depend largely on this, for on its subjective side poetic enjoyment is connected with memory pictures, and movement is conspicuous in these.[612]

All this is true in a higher degree of the enjoyment of musical movement. Herder said once: "The passionate part of our nature (τὸ θυμικόν) rises and falls, it throbs or glides softly. Now it sweeps us along, now holds us back; it is now weak, now strong; its own movement, its step, as it were, varies with every modulation, with every strong accent and vanishes as the tone varies. Music strikes a chord in our innermost nature."[613] In all this we find not only the effect of association, but actual motor processes in our own bodies, which extend from the rhythmical movements, visible for others, to the most delicate (and invisible) associations in the inner part of our body. The process which I tried to characterize in the section on hearing-play is with me connected with breathing

movements and tensions of the throat and mouth muscles, and is thus symbolic in both directions. Those who play much on some instrument commonly find that with them the tension is of those muscles which they most use—this is apt to be especially the case in recalling a remembered melody. We must avoid a too free assumption of "internal song," as well as of throat movements. Baldwin says,[614] "I am able with the greatest ease to hold aloud an ā sound at ć, say, and at the same time cause a whole tune—say Yankee Doodle—to run its course 'in my ear.'" I, too, can do this, though not with ease; the remembered tune is literally "in the head"—that is to say, I have the sensations of movement which represent this melody clearly in my mind, where they are difficult to locate, but are actual sensations, not mere memories. I can observe this process to better advantage by holding my breath and drumming on the table, hearing a melody in the rhythmic movement. These instances, however, do not clear up the undeniable contrast between an acoustic and a motor melody, particularly as in the first, motor accompaniments are entirely wanting. This is probably the case in a much higher degree for æsthetic enjoyment than for mere recollection.

I pass finally to the consideration of the æsthetic impression of objects at rest, giving first two examples from the article already cited, by Vernon Lee and Anstruther-Thomson, who seem to stand aside altogether from the conflict raging among our own students of æsthetics and psychology at present devoting themselves to this subject. They are more under the influence of the Lange-James sensation theory, in the pursuance of which they have little in common with the theory of symbolism as advanced here, and do not even make use of the term inner imitation. Yet the fact of it leads them to the expression "to mime" in attempting to characterize æsthetic perception. Their observations undoubtedly transcend the normal (particularly in motor types), and in some instances practice comes to the aid of natural endowment, while auto-suggestion occasionally plays a part. These extreme cases, however, may serve to call the reader's attention to the normal conditions, which are not so obvious.

The first example relates to the inspection of a jar. "Here is a jar equally common in antiquity and in modern peasant ware. Looking at this jar one has a specific sense of a whole. One's bodily sensations are extraordinarily composed, balanced, correlated in their diversity. To begin with, the feet press on the ground, while the eyes fix the base of the jar. Then one accompanies the *lift up*, so to speak, of the body of the jar by a *lift up* of one's own body; and one accompanies by a slight sense of downward pressure of the head the downward pressure of the widened rim on the jar's top. Meanwhile, the jar's equal sides bring both lungs into equal play; the curve outward of the jar's two sides is

simultaneously followed by an inspiration as the eyes move up to the jar's widest point. Then expiration begins, and the lungs seem closely to collapse as the curve inward is followed by the eyes, till, the narrow part of the neck being reached, the ocular following of the widened-out top provokes a short inspiration. Moreover, the shape of the jar provokes movement of balance, the left curve a shifting on to the left foot, and *vice versa*. A complete and equally distributed set of bodily adjustments has accompanied the ocular side of the jar; this totality of movements and harmony of movements in ourselves answers to the intellectual fact, of finding that the jar is a harmonious whole."[615]

Now an example of the influence of attention in the observation of plastic form: "We can not satisfactorily focus a stooping figure like the Medicean Venus if we stand before it bolt upright and with tense muscles, nor a very erect and braced figure like the Apoxyomenos if we stand before it humped up and with slackened muscles. In such cases the statue seems to evade our eye, and it is impossible to realize its form thoroughly; whereas, when we adjust our muscles in imitation of the tenseness or slackness of the statue's attitude, the statue immediately becomes a reality to us."[616]

It is easy to turn such passages into ridicule (and there are some much stranger in the article), but the fact is that they are only extreme expressions of actual elements in all the motor forms of æsthetic enjoyment. But the authors have not grasped the fact of symbolism, and they stress too much the sensations of movement, just as Sergi, for example, has done in his Dolera e Piacere. When the scholar in Riehl's Burg Neideck, on his first sight of an extended plain, had the feeling of being himself widened out, this effect was in all probability due to sensations produced by breathing movements. Yet this is not in itself the whole satisfaction, but rather a mere motor symbol which satisfies the imitative impulse, just as the external suggestion is responded to by dramatic imitation, or the little motions of the body in the phantastic visions of the dream.

To answer the question of how this play of inner imitation originates, it must be borne in mind that voluntary external imitation must always be preceded by a stadium of adjustment (or "Einstellung"). So it is especially in childhood, where this prodromal stage is often of long duration. And what are here the objects of the child's imitation?—sounds, gestures, attitudes. Now sounds, gestures, and attitudes are also the very objects of *inner* imitation in æsthetic pleasure.

In concluding, we are confronted by the question whether this faculty of inner imitation belongs exclusively to a special group of individuals—namely, the distinctly motor type. If this is so, then a very important part of the æsthetic

satisfaction is confined to a fraction of the human race. One hesitates to affirm that we of the motor type labour under the disadvantage of taking intense pleasure in a state which is lacking in physical resonance, so to speak; and yet, if this is the case, we still can boast that fusion with past processes which after all leaves the plus sign in our favour. I am convinced, however, that no such sharp distinction of types is warranted by the facts, the difference being as a rule one of quantity or degree of individual endowment. Ability to observe such movements in one's self is no criterion. There may be individuals with very strong inner imitative movements who are unable to separate the motor element from the *tout ensemble*. To illustrate the difficulty: A man who glances suddenly to the right imparts to surrounding objects an apparent motion to the left (this may help to account for the "fluidity of form"), yet to many it is impossible to get a clear perception of this, even under the most favourable conditions. In the same way there are probably many who deserve to be reckoned with the motors in æsthetic enjoyment who are yet unable to make their own movements a matter of observation.

IV. Social Plays

Much discrimination is required in the attempt to single out a special group of social plays proper to our subject. I am, however, well aware that it is an essential feature in any system of play, and that Baldwin is quite right when he says in his valuable preface to The Play of Animals, "Finally, I should like to suggest that a possible category of 'Social Plays' might be added to Groos's classification." The great difficulty is that it is well-nigh impossible to make separate observations on them as a distinct class, for as a rule the social impulse furnishes the incentive to the special games which we have considered. To take a familiar example: Society chat is a social play *par excellence*, and yet the indulgence in this element of it appeals to consciousness as but a vague and undefined satisfaction compared with the influence of the impulses to combat and to courtship. For this reason the present section must be of a somewhat different character from the foregoing ones. It must be theoretic, and thus form a connecting link with the second part of the book.

In the sphere of social play we still find ourselves in close touch with imitation. Though Tarde's formula, "La société c'est l'imitation," has the one-sidedness characteristic of an epigram, it is an unquestionable fact that this impulse is of fundamental significance in the origination and preservation of social conditions. Uniformity of conduct and sentiment, without which social co-operation would

be impossible, is preserved mainly by imitation, and, what is more, by its involuntary form, as illustrated in the infectiousness of such simple acts as coughing and gaping. But, before going into this, I must emphasize some phases of the social impulse which are not identical with imitation, and whose value to play is easily demonstrated.

It may be recalled that in our inquiry into the origin of the imitative impulse the question was raised whether its resemblance to instinct might not be explained by its relation to the genuine instincts of race affinity and the production of calls and warning cries. The physical and mental association common to men and gregarious animals seems to me to depend largely on these two relatively simple instincts, those of physical association and communication. Both are extremely important for the establishment of the family, and the view that the social factor has nothing to do with the family is, in my opinion, far too extreme. Ants and bees may serve them for illustrations, but in the life of herds and tribes the primal relation between mother and child seems to me the starting point from which the need of *association* and *communication* has extended.[617]

Our inquiry then will proceed from need of bodily association or the herding instinct as a starting point. However this impulse may have developed phylogenetically, ontogenetically the child's associative needs are at first satisfied by the family, and almost entirely by the mother; he is, as a rule, relatively late in turning his attention to a social sphere. "Before the third or fourth year," says Madame Necker de Saussure, with some exaggeration, "the child is happy only with his elders. His needs, his pleasures, and the certainty with which he counts on our protection are all in our keeping. Other children interest him for a time, but soon tire him, and their little tempers excite his own. In his inability to cope with such situations he turns again to the grown people."[618] Although this is put too strongly,[619] its essential truth is well known; indeed, Curtmann and Flashar for that very reason deprecate the extension of the child's social circle at too early an age, and Franz Kübel says, in Süddeutschen Schulboten (1875): "Because the life of an eremite, be he scholar, æsthetic, or what not, is a mistake, why should all of life necessarily be social? Why should the bud be forced to open too early? Why should the sphere of individual life be so soon widened to take in love for all? It seems to me indisputable that the early education of a child should be carried on in the family circle, and also that there is a dangerous tendency to arouse social impulses too early."[620] Indeed, we must admit that experimentation can not have its due effect if the child is introduced too early to a wider circle, and that the strong stimulus of social life tends to

overshadow and interfere with the development of family life when allowed to exert its full force on the very young. Just as with children who are kept too much at home, overweening family feeling interferes with their progress in society and hampers them through life, so, on the other hand, too much society weakens the parental relation. There should be a certain equilibrium of influence, as in all other departments of culture, to supply the most favourable conditions in the struggle for existence.

Returning from this digression, we remark first that there can be no doubt of the value of social games in preparing incipient men and women for later life. “Le società infantile,” says Colozza, “sono società di guoco.”[621] The demand for identification with some social group finds its satisfaction in this way, and this satisfaction rests, as we have seen, on the broad foundation underlying other instincts, especially those relating to combativeness. I merely mention the direct effect of the impulse for association, the agreeable consciousness of being “in the swim.” Among animals this feeling is manifested rather as a reaction from the annoyance of separation from the herd, yet the gregarious animal pasturing with its kind or carrying food to them may be filled with a cheering sense of security such as we experience when established in a cosy corner at the club. Be that as it may, the child at any rate, as soon as it is old enough to make the acquaintance of other children, is filled with eager desire to be wherever his comrades are assembled for whatever purpose. I need only hint at his rage and despair when he sees through a window that the “other fellows” are collecting, while he for some reason can not go out.

These early manifestations of the social instinct are too simple to require much illustration. We all recognise them, and they are frequently displayed by adults as well. Holidays spent in simple playful indulgence of the gregarious instinct are of the greatest value for the collective social life of mankind. Here as elsewhere the practice theory is applicable to adults, as two extremely diverse instances will illustrate most satisfactorily. One is the difficulty of keeping up religious community life when the festival character is allowed to lapse; even when there remains enough association of the votaries themselves to constitute a gratification of the associative impulse, yet the abandonment of holiday festivities undoubtedly has a marked effect. The tamer a religious observance becomes the larger the proportions of lukewarm adherents. Many sects have a clear perception of this, and it accounts for the fact that some of them employ methods not far removed from the practices of savages. This brings us to the second instance—namely, the importance of festive gatherings to savage peoples. If our owners, our own peasantry, scattered in families through the rural

districts, are in danger of losing their social feelings when deprived of religious or secular festivals, the necessity is yet much greater with primitive men. Apart from warfare, this is about their only means of association as tribes or clans. It is valuable, too, in connection with and preparatory to their fights. Among the Weddas of Ceylon, who “have not yet acquired the art of war,” and are very undeveloped socially, we find only feeble suggestions of the festival. From our noble cathedrals, our concert halls and theatres, and other places of amusement, converging lines lead directly back to the festal huts of savages. From these, however, women are as a rule strictly excluded.

Finally, I remark that a playful motive is often discernible in the formation of the multifarious clubs for the advancement of some worthy object in this age of abounding culture. We all know persons for whom an absorbing interest in the ostensible object of the club would be out of the question but for the good company. The mere fact of being one of a group is satisfaction enough to the gregarious instinct, and the playfulness of this condition can scarcely be questioned.

Turning now to the wider social impulses to which these simple manifestations are related, we must first notice the voluntary subordination of the individual which is so essential a feature. In the relation of parent and child there could hardly be any training, and certainly no such thing as education, without this element. After dwelling on the child’s spirit of opposition, Sully gives in his Studies in Childhood the contrary picture in a series of incidents designed to show that there is yet in the childish soul something “on the side of law,” and goes on to remark that “it is worth while asking whether, if the child were naturally disposed to look on authority as something wholly hostile, he would get morally trained at all.”[622] While this is true, still the contrary, rebellious spirit is developed by the parental relation, and we may see voluntary subordination much better illustrated by going on the street with the child and noticing his behaviour with his playmates. The blind obedience accorded the leader of a little band is calculated to fill parents and teachers with envy. Here the social impulse is supreme in the demand for association and classification which governs and directs society. The same relation exists among animals between the herd and its leader, and no orderly association of men could exist without it. As simple compulsion is not enough with children, so with adults discipline is insufficient. The leader’s command must be met by an inward disposition to obey in the interests of the whole. The heads of political parties who thunder invectives against the “slaves” and “dumb cattle” in other parties are yet considerably disconcerted when their own followers display too little of the disposition for

subordination.

The common fighting plays of children markedly exhibit this voluntary submission to a leader, less known, I think, in regulation games than in the many contests which a crowd of children will naturally fall into when a few belligerent spirits are present; when there is a trick to be played on schoolmates or janitor, an orchard to plunder, some unpopular person to annoy by breaking his windows or otherwise damaging his property—in these escapades the leader's word has absolute authority, and the most docile children will commit deeds in blind obedience which fill their parents with amazement and horror. The influence of example is a factor not to be overlooked, but it is not by any means all; more influential still is the *esprit de corps* after the plot is once hatched. Formerly, when children were given more freedom in this direction, schoolboy leagues were of great importance, but even now their associations for contest play a weighty part in youthful life; there they learn to see how common peril strengthens the bond of union and enjoins submission to the leader. It is an illustration in miniature of the influence of war on the evolution of society.

This leads to the observation that play is instrumental in teaching children submission to law as well as to a leader. Thus H. Schiller says very truly of gymnastic exercises: "They promote not only presence of mind, dexterity, skill, and readiness, but furnish as well valuable training for society. Law and limitation are here self-imposed by the players, and he finds them again in the bounds which he strives to transcend."[623] Since gymnastic and belligerent games afford exercise chiefly to males, we trace here an interesting distinction between the sexes. It seems that those manifestations of the social impulse relating to subordination are not pursued by women so energetically nor in the same way as with men. Woman is the guardian of good form, but as a rule she will not subordinate herself to rigorous law. I think any customs agent will bear me out in this statement from his observation of the behaviour of travellers. This probably results from a difference in the instinctive equipment of the sexes; fighting impulses, which are strongly developed in the males, further the social ones by reason of their imperative requirement of association. This is apparent in the exercises referred to by Schiller, and is materially advanced by the practice which play affords. The success of American women in their movement for emancipation is largely furthered by their participation with men in various sports and the consequent better development of their social capacities.

I conclude these remarks on voluntary subordination with some reference to the origin of punishment. It is commonly referred to the principle of vengeance, but,

though feelings of personal grievance and revenge may be closely involved in its origin and development, they can not entirely account for the institution of punishment. Even the play of children clearly distinguishes between personal revenge and social chastisement. The infraction of the unwritten laws of our familiar games arouses a spontaneous and general sentiment against the offender which does indeed resemble the demand for vengeance, but stresses more the idea of social injury. What urges to the chastisement of the liar, the coward, and the betrayer is a righteous indignation which results from outraged social feelings, and the desire to expel the offender from the group. This was apparent in the early tribes from which all civilized peoples have developed. Justice is as old as social humanity, and if it can be derived at all from personal revenge this could have been possible only as far as offences between man and man were regarded as offences against the community as a whole.

Social sympathy next demands our attention as connected with the demand for association, and for the sake of brevity I include in the term not merely the inward sentiment, but also the *émotion tendre* and the readiness to lend a helping hand to other members of the same group. It is perhaps best defined by the expression “good fellowship,” which is everywhere current. Play has a significant part in it as well with children as with adults. I introduced a passage in The Play of Animals on the actions of some young foxes who amused themselves playing together until some occasion arose for strife. Then, one of them being bitten so that blood flowed, the others fell upon and devoured him; and I then remarked that “the good comradeship of young animals is first of all a play comradeship. It exists in play when aside from the conditions of the play there is little sympathetic feeling.” This is to a great degree applicable to humanity as well. Apart from relations of actual friendship which are deeper than simple comradeship, we find among individuals very little genuine interest and kindliness. It is only when people are members of the same social group that they learn to regard one another with the friendly feeling which is necessary for effective association. Social sympathy is apt to be but a wider egoism, and the identification of the individual I with the social whole a slightly more circuitous route to self-advancement. When party lines are obliterated the interest subsides, as many have discovered who counted on personal friendship as a result of social sympathy. Further consideration of the value of this comradeship, however, shows it to be indispensable to the formation and maintenance of society, and that the school in which it is developed is furnished by play. Children scarcely manifest it in any other connection; as they grow older they may form friendships independently of their common play, but as a rule their

comradeship is that of play. With adults the case is not very different, for even when they associate for a serious purpose banquets and other playful features are considered indispensable for strengthening the bond. These festivities, it is true, have their root in the common need for amusement, but their practical value consists in the impetus they give to social sympathy, and their indirect furtherance of effective association.

As the associative impulse which we have made our starting point primarily promotes external connections, but is attended with various far-reaching consequences, and finally results in the demand for communication, so this last, from serving first the narrow unit of the family, brings about the inner spiritual union of the social group. The chief means which serves this impulse of humanity is language.[624] Although this communication does serve a practical purpose from its very inception, there are still many playful manifestations of it. Compayré offers an observation which may be regarded as a prelingual illustration of this. It records a sort of dialogue between a child, still unable to speak, and his elder brother. “Pendant quelques minutes c’est une alternance ininterrompue, là de mots et de phrases nettement articulés, ici de petits cris confus.”[625] Older children, too, often show the same thing in their play with dolls and other toys as well as toward persons and animals. We sometimes sigh for a limit to the unmeaning gabble which the child apparently enjoys for its own sake.

Similar observations have been made on adults, though here as with children it is difficult to draw the line between play and earnest. So far as the object is to instruct others or make a good impression and thus improve one’s own social standing, the act is serious, but it oftener wears the aspect of merely playful self-exhibition. And, finally, when an unimportant piece of news is passed about and talked over “just for something to say,” we have an instance of pure playfulness, since a satisfaction of the social impulse is sought without serious aim and purely for its own sake. The teas and Kaffeeklätzchen so affected by women are of a similar character. Without attempting to analyze too closely the style of conversation prevailing on such occasions, we venture to say that a universal desire for expression is conspicuous. This is certainly the fact in the social gatherings of men and of society in general. Ordinary society chat is a social play.

There are other phases of conversational intercourse, however, which are more germane to our present purpose, such, for example, as the invention of special forms of speech which are selections from tentative efforts by the process of

exclusion. The great social importance of a common language thus finds expression in play. Reference has already been made to the fact that children coin words—that is, they make use of sounds independently discovered by experimentation. Sometimes several children will construct a sort of secret language in this way. The remarkable case referred to by H. Hale of a pair of devoted twins who did not learn first the language spoken around them, but one all their own, in which they conversed with ease and fluency, is not, however, an instance in point, since there was evidently no play about it. Yet children do form such a secret system sometimes in play. Colonel Higginson mentions two girls about thirteen years old who made a language for their own amusement. They wrote about two hundred words of it in a book. Thus “Bojiwassis” denoted the half-anxious, half-resolute feeling that precedes taking a leap, and “Spygri” the pride in having accomplished it. “Pippadolify” expressed the stiff manner of walking of the young officers in Washington.[626] This well illustrates childish versatility in word coinage. Von Martius, Peschel, and others attribute the rapid transformations in the language of savages to the influence of children, whose faulty reproduction of words learned from their parents is adopted by the latter.[627] Also original creations arise in the intercourse of parent and child. We have already spoken of the imitative sounds that come into a language in this way, and childish experimentation may be equally influential. “Papa” and “mamma” are evidences that this is sometimes true, and many other words may have had a similar origin.

But, turning again to our subject proper, we find that the tendency of a social group to distinguish itself by its manner of speaking is widespread among adults.[628] It can not always be called playful, however, as some serious aim is often had in view, as in the code of criminals and the passwords of secret societies, but the technicalities of special callings and professions are often clearly playful, and are especially affected by the newcomer who is impressed with the advantages of belonging to the set. With what zeal does the newly initiated sportsman set himself to learn the vocabulary of the chase! With what unction does the freshman repeat the latest student’s slang! Conan Doyle, in his Rodney Stone, has given us an admirable picture of the affected speech of the English dandy at the beginning of the nineteenth century, and the euphuism of Shakespeare’s time is another instance. Pleasure and pride in belonging to a certain class or set are often manifested in such peculiarities.

But impulse for communication may assume other forms, as in the cases when we found it of so great value in courtship under the form of self-exhibition. And

it has also, as Baldwin[629] points out, a more general social significance. While our personal peculiarities are first brought out in our intercourse with others, we at once become conscious, on the other hand, of an impulse to display them in order to gain influence. Satisfaction with one's own achievements is attained only when these have gained social recognition. Self-exhibition plays an important part, too, in the pleasure we derive from collective games. The rivalry which we have studied from the standpoint of the fighting instinct takes a more pacific form, as the pleasure of finding one's importance testified to by imitation on the part of others. This is not mere exultation in victory over others, but takes higher ground, since the sense of superiority which it engenders is dependent on their support.

When the display of one's excellences thus transcends verbal expression it results from the highest forms of social intercourse, from that devotion of time and energy to society which constitutes the vocation of the social leader. It is the very opposite to that voluntary subordination to a leader of which we have spoken, and yet true social leadership also is founded on just such subordination. The aspirant for its honours must so merge himself in the society that its aggrandizement shall mean his own—a signal proof of the force of the social impulse. Whether the task is great or small, the ruling of an empire or the leadership of a club, the principle is the same, and consequently the social plays of children are enlightening. Even here, forceful, active, inventive natures quickly attain the mastery and the difference is apparent between the merely violent, who think only of their own advancement, and the born leader who makes the interests of society his own, who is ready to answer for the crowd, and is found in the front line in times of danger and will suffer no injustice to any of his following. Such leadership is possible only where there is the capacity for identifying his own will and conviction with those of the rest, thus effectuating the groups' subordination. The "magnetism" of those who succeed as leaders depends on the presence and force of this faculty; they must have not mere strength of will, but the kind of will adapted for fusion with the common will for the attainment of its social ends.

In concluding these observations on the associative principle, I must notice the social side of artistic activity. It may be said in general that artistic production fulfils an important function in giving universal pleasure. H. Rutgers Marshall tries to establish the existence of "the blind instinct to produce art works."[630] The attempt, however, to analyze the social tendencies operative in the creative artist will disclose the two last-mentioned forms of the communication impulse. The artist longs to set forth with all his power that which fills his soul, and to

make objective representation of it for his own benefit and that of others, and at the same time win, by this unfolding of his nature, influence over the souls of others—giving that he may gain. This motive is not equally strong in all art, yet to a certain degree Richepin's passionate words apply to any such work: "C'est tout moi qui ruissela dans ce livre.... Voici mon sang et ma chair, bois et mange!" and every great artist strives for mastery over the emotions of others. The genius may, it is true, create only for himself or a choice few, or when his work is finished he may conceive a distaste for it or not concern himself at all about it, yet on the whole it can not be denied that the controlling motive (half conscious, it may be) is the desire to gain mastery by means of his art. Gildemeister rightly says: "Publicity is the breath of art. Dilettantism may be confined to the studio or the salon, art must speak to the people."[631] Since it is directly through these social aims, however, that æsthetic production diverges from play, we need not linger on the subject.

We now take up the last of the social influences which we had to consider, the powerful agency of imitation, and more especially such involuntary imitation as is manifested in the infectiousness of coughing, gaping, etc. Its influence is universal. Espinas, Souriau, Tarde, Sighele, Le Bon, and others have treated the problem of such mass suggestion, and Baldwin contributes a valuable chapter full of critical acumen on the Theory of Mob Action, in his Social and Ethical Interpretations. To introduce the subject I give two examples, one from animal psychology, the other from anthropology, illustrating the extreme phenomena of mass suggestion. Hudson gives us the following: "This was on the southern pampas at a place called Gualicho, where I had ridden for an hour before sunset over a marshy plain where there was still much standing water in rushy pools, though it was at the height of the dry season. This whole plain was covered with an endless flock of chakars, not in close order, but scattered about in pairs and small groups. In this desolate spot I found a small rancho, inhabited by a gaucho and his family, and I spent the night with them. About nine o'clock we were eating our supper in the rancho when suddenly the entire multitude of birds covering the marsh for miles around burst forth into a tremendous evening song. It is impossible to describe the effect of this mighty rush of sound.... One peculiarity was that in this mighty noise, which sounded louder than the sea thundering on a rocky coast, I seemed to be able to distinguish hundreds, even thousands, of individual voices. Forgetting my supper, I sat motionless and overcome with astonishment while the air and even the frail rancho seemed to be trembling in that tempest of sound. When it ceased, my host remarked with a smile: 'We are accustomed to this, señor; every evening we have this concert.' It

is well worth the ride of a hundred miles to hear this demonstration."[632] Mediæval dancing may furnish an example from human life. At Freiburg in Switzerland, in 1346, before the castle of Graf Greyerz, a dance was practised which began with simple movements. They gathered strength, however, like an avalanche, and spread through the entire country. Uhland has made this dance the subject of a poem, which may be paraphrased as follows:

"The youngest maiden, slender as a stalk of maize,
Seized the count's hand and drew him in the ring.
They danced through the village, where file succeeded file,
They danced across the meadows, they danced through the wood,
To where, far across the mountains, the silvery sounds rang out."

Marrentanz.

These, as I have said, are extreme manifestations of mass suggestion, and should not be given too much weight in explaining social development. "The loss of identity and social continence," says Baldwin, "on the part of the individual, when he is carried away by a popular movement, is well struck off by the common saying that he has 'lost his head.' This is true; but then he regains his head and is ashamed that he lost it. His normal place in society is determined by the events of that part of his life in which he keeps his head. And the same is true of the events in the life of the social group as a whole."[633] Yet these forms of suggestion which border on the pathological are but exaggerations of social qualities indispensable to the race. Had we not the inborn impulse to imitate movements which sweep through a mob, great occasions would never find us ready with great actions. The magic power of mass suggestion is the indispensable complement of the social leader's talents, and consequently is closely related to our familiar voluntary subordination. Tarde even regards obedience as a special case of imitation, and to strengthen his position reminds us that command begins with example. With monkeys, horses, dogs, etc., the leader sets the example by performing the particular act, and the others imitate him.[634] Yet I am quite confident that voluntary subordination is not identical with imitation. Even with animals the leader is the strongest, most skilful, and generally the most intelligent of the herd, and obedience appears as imitation perhaps, but not of the ordinary kind; rather of one who by means of the force of his individuality compels subjection through fear, respect, and love, or the compounding of these. The need of the weak to lean on the strong does indeed lead to imitation, but is not identical with it.

Moreover, it seems to me that an explanation of mass suggestion can not be arrived at by means of the imitative impulse without the assumption that voluntary subordination works with it; that blending of fear, respect, and attraction is not necessarily confined to a single leader, but may be directed to the whole group, and, indeed, without such a sentiment the leader's influence would be much crippled. Those whose minds are made up not to go with the herd (the partisans of another faction, for instance) will display little imitative inclination so long, at least, as this determination is clearly defined. But when

the personality of the leader and the imposing and alluring aspects of the mass combine their effects, the imitative impulse assumes its full force. The result is quite similar to that obtained in hypnosis, with which it is often compared, and in the manifestations of which, in spite of the important rôle played by imitation, voluntary subordination is indispensable for the operation of suggestion.

If now we inquire as to how these processes take effect in play, we find the practice theory applicable to adults in a greater degree even than to children; for we are at once confronted by the importance of festivals as mentioned above and again impressing itself upon us here. For the further division of our subject I distinguish between general acts and general inner imitation, in the former of which motor and in the latter emotional suggestion is conspicuous.

The desire to act in conjunction with the social group finds manifold expression in the play of children. “Any one who watches the games of a set of boys in the school yard or in the streets,” says Baldwin, “will see that it is only a small part of the moves of the game which are provided for with any consistent or well-planned plot or scheme. The game is begun, and then becomes, in great measure, the carrying out of a series of *coups et contre-coups* on the part of the leaders among the players; the remainder following the dictation and example of the few. When the leader whoops, the crowd also whoop; when he fights, they fight. All this social practice is most valuable as discipline in serious social business.”[635] Such effects of general imitation are prominent in most social fighting plays, but we shall confine ourselves to some children’s games in which acting in common seems to be itself the principal aim. Here we are met by the fact that in its last analysis such play is referable to adult imitation—that is to say, they are handed down to the children. A simple kind of play, which clearly reveals a social character, is that in which the children imitate all sorts of movements made by the leader. For example, take the familiar one in which the children dance around, hand in hand, singing:

> “Adam had seven sons, seven sons had Adam,
> They ate not, they drank not, they looked in his face
> And did just so”;[636]

whereupon they all stop, the leader stepping to the centre of the circle and making all sorts of motions—clapping hands, bowing, bending, lifting his arms, sawing, scrubbing, fiddling, sneezing, coughing, laughing, crying, etc.—all of which are repeated by the other children. This same song was probably sung by adults in the Easter processions which were derived from the mediæval pest dances, but even so their origin is not yet reached. The following description by

Svoboda strongly recalls the play of children: “Dancing is the greatest pleasure of the Nikobars; it is very solemn and slow. A place is cleared for it among the huts; the leader steps out, and first of all marks a great circle, while each man lays his hand on his neighbour’s shoulder. The leader raises the tune, making a step, now left, now right, swinging his free leg. All keep their eyes fixed on him and mimic what he does, sinking on their knees, sitting on their heels, and then making a grotesque leap, or stepping backward and forward. All this is repeated stiffly, mechanically, and without any spirit, but constantly accompanied by a nasal song, until late in the night.”[637]

Further we may notice dancing games of children accompanied by song. In looking through a collection of them like that of Böhme, one is astonished at their variety as well as the remarkable and often apparently meaningless songs that accompany them. Many are of the opinion that they date from the middle ages, while others trace them back to the old German religious dances along with a cycle of songs in celebration of the goddess Freija. As a rule, proofs are wanting in both directions, and there is a choice of opinions between them. If, for example, the common stooping at the end of a stanza appears to be a survival of some religious ceremony, it may just as probably be the duck, duck, duck of animal dances of prehistoric times. Rochholz has actually derived a Swiss form of the song from such mimicry of animals. The obscurity of many verses is caused by the frequent introduction of new subjects. In one case the ceremony of taking the veil is dramatically gone through with, and J. Bolle states that this originated in a thoroughly frivolous dance of adults. Indeed, the intermeddling of adults is constantly to be reckoned with, as in the case of a shepherd’s song, where “Adam” is substituted for “Amor” with evident ironical intent.

In regard to such games of children the following question is a pertinent one: How does it happen that the social plays whose models are formed in the dancing of men or of both sexes are practised chiefly by girls? If we think back to our own childhood we shall find that while little fellows do take part in such games, older boys regard them as unmanly and unworthy of them. I suspect that in earlier times, when the men indulged in them, the boys gladly followed suit, as is quite generally the case among savages now.

A final word on children’s festivals, in which the social significance of play is most clearly displayed. Take the most familiar example, the school picnic: if only a handful of children go for an outing with a teacher they are not particularly delighted, but when the whole school goes their pleasure is increased more than proportionately to their numbers. They are excited and joyous, and

every expression of pleasure seems multiplied by a many-voiced echo, and, until they grow tired, all show a readiness to obey the spirit of good comradeship. Such an occasion bears all the essential marks of a genuine festa, with its feeling of belonging to the social group, subordination to the good of the whole and to the leader who represents it, sympathetic participation, and satisfaction of the associative impulse in its various forms, the attraction which belongs to actions and enjoyments in common with others, and finally the festal board which makes a play of eating and drinking. Some of the festivals of children, too, have been handed down from the sports of adults. A Swabian dance that was formerly performed by the salt refiners now belongs to the children, who dress for it in the costume of the craft. But most such holidays have a much earlier origin in pagan feasts, as in the case of Easter, Mayday, Whitsuntide, midsummer, etc. I take as my solitary example the Heidelberg Sommertagsfest, in which a portable pyramid of straw represents conquered winter, and one bedecked with fresh green is triumphant summer. The attendant children carry wands trimmed with eggs, pretzels, and gay streamers, and sing as they go:

"Strieh, Strah, Stroh,
Der Sommerdag is do.
Der Sommer un der Winder,
Des sinn Geschwisterkinder.

"Summerdag Stab aus,
Blost dem Winter die Auge aus.
Strieh, Strah, Stroh,
Der Sommerdag is do."

This ancient mythological festival, which survives with wonderful vitality among children in the Palatinate and some other localities, threatened to become extinct in Heidelberg until some one seriously undertook its restoration. It is an inspiriting sight when the fine old streets are the scenes of the processions of numerous summer and winter pyramids, and thousands of children in holiday attire, carrying the gay wands and merrily singing the old song. It can not be questioned that feelings of fellowship and attachment to home are heightened and deepened by the practice of such customs.

Turning now to adults, whose festivals furnish the models for these childish ones, I can not better illustrate the importance of imitation on such occasions than by repeating the striking passage quoted from James in the Play of Animals. In concluding a passage on play he says: "There is another sort of human play, into which higher æsthetic feelings enter. I refer to the love of festivities, ceremonies, and ordeals, etc., which seems to be universal in our species. The

lowest savages have their dances, more or less formally conducted. The various religions have their solemn rites and exercises, and civic and military powers symbolize their grandeur by processions and celebrations of divers sorts. We have our operas and parties and masquerades. An element common to all these ceremonial games, as they are called, is the excitement of concerted action, as one of an organized crowd. The same acts, performed with a crowd, seem to mean vastly more than when performed alone. A walk with the people on a holiday afternoon, an excursion to drink beer or coffee at a popular 'resort,' or an ordinary ballroom, are examples of this. Not only are we amused at seeing so many strangers, but there is a distinct stimulation at feeling our share in their collective life. The perception of them is the stimulus, and our reaction upon it is our tendency to join them and do what they are doing, and our unwillingness to be the first to leave off or go home alone."[638]

As we can not possibly review the whole field of society, a few general remarks must suffice to supplement what has already been said. While there was at one time a tendency to relegate this, like so many other sociological problems, to a religious origin, such a proceeding is now regarded with some degree of skepticism. The Australians celebrate all important events by dances—the harvest, the opening of the fishing season, the coming of age of youths, a meeting with friendly tribes, setting out to battle or the chase, and success in these. "Among the pacific Bakaïri on the Rio Novo," says von den Steinen, "the principal festival is in April. I, with my civilized ideas, clung to the supposition of a thanksgiving celebration, and wondered what friendly power was the recipient of all this praise and gratitude. I tried to get something definite out of Antonio, but he was unresponsive to my suggestion. 'We have the feast at harvest time,' he said, 'because we have something to feast on then; in the dry season we have to scrimp, and in the wet season everything is afloat.' Materialistic, if you will, but eminently practical."[639]

It seems then that the origin at least of the festival is referable to general social needs whose important stimuli arouse a general excitation, and thus attain their most effective expression. The essentials to primitive festivals were the feast and the dance, both being conducted with the intemperance characteristic of mass suggestion. Here we find again that playful satisfaction of the sense of taste which claimed our attention in the beginning of this discussion, and this is its clearest manifestation, since here the play is a social one. As the child may be led to perform incredible feats in the consumption of cakes, candy, and other dainties at a party, so the adult, when not hampered by anxiety about his digestion or compunctions as to such impositions on hospitality (and these

considerations are usually as far from the mind of a savage as that of a child), can accomplish quite as much on festive occasions. This effect is furthered by the free use of alcohol, which, in spite of its many bad qualities, is not to be despised as a promoter of sociability. We hear so much of the fights and brawls to which the unlicensed indulgence in spirituous drinks gives rise that we forget that mild intoxication puts the majority of men in a cheerful and friendly humour, and is calculated to promote the good fellowship of the company. Without the least intention of denying the danger incurred in the use of alcohol as a beverage, I still think it only fair to show the other side of the picture—namely, the damper it puts on anxiety and care, and its promotion of social sympathy, of the associative impulses and the capacity for enthusiasm in all directions.

Dancing, which next to feasting is the most primitive form of festivity, is kept up to an incredible duration, the expenditure of strength being constantly renewed. In the sagas of the Bakaïri, it is said of Keri, the founder of the tribe: "Keri called all his followers together, and in the evening they danced on the village green. Keri stopped to drink while the dance costumes floated in the air about him. He called to Kame [the ancestor of another tribe]. Many of the people came, and Keri was lord of the dance. They danced the whole day, and only rested toward evening; after dark they began again and danced the whole night. Early in the morning they went to the river and bathed; then they came back to the house and began again and danced all that day and night. Then the holiday was over."[640] The intoxication of motion, which, as we have before seen, is probably the chief stimulus in dancing, is universally enjoyed on such occasions, and enhances the social impulses. It is a sort of ecstatic state apart from the narrow individual sphere, and favourable to social affiliation. Indeed, among primitive people it is often the indispensable condition of an alliance, as there is a widespread custom for several neighbouring tribes to collect for some high feast. No one has given a better description of the importance of the dance for the promotion of sociability than has Grosse. "The warmth of the dance," he says, "fuses the distinct individualities to a unified essence moved and governed by a single emotion. During its progress the participants find themselves in a condition of social completeness, the different groups feeling and acting like members of a unified organism. This is the most important effect of primitive dancing. It takes a number of men who, in their detached, unsettled condition of varying individual needs and desires, are living unregulated lives, and teaches them to act with one impulse, one meaning, and to one end. It makes for order and cohesion in the hunting tribes whose way of life tends to separate them.

After war it is perhaps the one factor which makes the interdependence of individuals of savage tribes apparent to themselves, and incidentally it is one of the best means of preparing for war, for gymnastic exercises prefigure military tactics in more ways than one."[641]

In studying the festal and social customs of highly civilized peoples, while we find much that is new, many things are reminiscent of savage life. Eating is still the principal feature, but the common impulse to activity is no longer expressed in forms so specialized as the savage dance, for the modern social dance is of comparatively little importance in this connection. Entertainment by means of vocal and instrumental music and rhythmic elocution, displays of physical prowess and singing contests almost complete the list of plays applicable here, being concerned as they all are with collective life. I may mention one other phenomenon, however, which illustrates the analogy with primitive customs—namely, the societies formed for social enjoyment. They prove the need felt by civilized men to form within the limits of their more extended social sphere smaller circles which by their exclusiveness enhance the feeling of sympathy. Formerly, when special well-organized groups arose in the burgher guilds, they were partly of a social character, as J. Schaller points out,[642] and we yet have labour unions, merchants' clubs, and artists' leagues, though in many of them the trade or calling is no longer stressed; on the contrary, versatility is the chief desideratum in the membership, and no strict exclusiveness prevails. Such details are commonly determined by the general degree of cultivation prevalent. Moreover, there is apt to be a certain ritual belonging to such organizations, with written statutes and unwritten traditions, all more or less playful, and quickly developed among savages into a sort of cultus. I am not aware whether a monograph exists treating this subject in detail, though one would certainly be of interest.

Secret societies recall the usages of savages, especially in one particular—namely, in excluding females. The implication in the use of the word savage, usually unjust, is quite fair here, since the men are pledged to inflict instant death on the woman whose curiosity should penetrate to the secrets of their club. And while among civilized men the protest is less vigorously applied, still the exclusion is enforced. Von den Steinen thinks that among the Bakaïri the regulation is due to their objection to having their women seen by strangers, and representatives of several tribes usually take part in the dance. Their other festivities are special hunting feasts, which are regarded as altogether unsuitable for the participation of women.[643] Quite as influential, if not more so, seems to

me the natural feeling that the presence of women destroys the company's sense of unity. Savages especially, who regard women with open contempt, would feel ill at ease if their festivities were invaded by the other sex. When we see how little boys, as soon as they are out of their infancy, spontaneously refuse to take little girls for their playmates,[644] we must ascribe some serious meaning to this essential distinction between the sexes. It is this, I think, which forms the chief ground for the exclusion of women from the sports of civilized men, and perhaps the same desire to be left to themselves is a considerable factor in masculine opposition to the woman's movement.

In any remarks on general inner imitation we must be particularly careful to keep well within its proper definition, or we are sure to find ourselves launching out into the vast domain of æsthetics. How inner sympathy is conditioned on the effects of past experience; how it is raised to the level of æsthetic emotion only through the fact that the beholder or hearer enjoys the fusion process for its own sake; and how, finally, this inner imitation consists, at least with motor individuals, and perhaps with all who are capable of æsthetic perception, in actual movement on their own part in conjunction with this fusion—all this has been set forth in a former section. Here we are considering merely the social aspects of such play, and we find its manifestations well marked. As a rule, the child, like the adult, when in the presence of any soul-stirring spectacle, longs for a companion to feel it with him, and when a whole social group unite in a common imitation, the emotional effect is vastly augmented. The social effect of such collective enjoyment is usually marked by an increased sense of fellowship, but beyond this there is an appreciable difference of quality which under favourable conditions directly furthers the social feeling. Let us begin by observing the dancing of savages again, where we find besides the pleasure of participation the equally strong effect of seeing and hearing the other dancers—a fact that is reiterated again and again in the descriptions of such occasions. The facile transition from real imitation to inner sympathy is one indication of their close kinship. The spectator is impelled to accompany the rhythmic movement of the dance music by all sorts of motions on his own part. Millendorf gives us the following description: "Soon the dance became heated, the movements turned to hops and leaps, the whole body being involved and the face inflamed; the cries grew constantly more ecstatic, the clapping wilder, and the few garments were finally thrown off. All present seemed seized with a frenzy; a few attempted to withstand it for a while, but soon began to move the head involuntarily, now left, now right, keeping time, and then suddenly, as if bursting some invisible bonds, they leaped among the dancers, widening the circle."[645]

As soon as external imitation begins, æsthetic enjoyment accompanies it, but there is no doubt that to bring this about there must be intense inner imitation before the overt act becomes irresistibly attractive.

As has already been pointed out, the general social importance of inner imitation depends on its enhancing effect on the feeling of fellowship, as is illustrated even in the dancing of savages. As to the part played by self-exhibition in this effect, we may mention that gymnastics and war dances, which are performed before spectators, afford opportunities for the display of physical advantages and martial prowess. Among the lowest tribes known to us, however, the accompanying song seems to have hardly any other than a musical significance, consisting as it does in the mere repetition of meaningless sounds, and can not, therefore, be considered as influential in the sense that the dramatic poetry of higher standing peoples is so. But the war dance which pictures forth the enemy's defeat may be said to have something of the effect of our patriotic drama. Some tribes, indeed, give the dramatic representation without rhythmic dance music, more after the manner of civilized acting. Lange describes an Australian play in the last scene of which a fight between white men and natives is introduced. "The third scene opened with the sound of horses tramping through the woods—horses are indispensable to the representation of whites. The men's faces were stained a brownish white, their bodies blue or red to represent the bright-coloured uniforms. In lieu of gaiters their calves were bound with rice straw. These white men galloped straight for the blacks, firing among them and driving them back. The latter quickly rallied, however, and now began a mock battle in which the natives overcame their foes and drove them away. The whites bit off their cartridges, set the trigger, and, in short, correctly went through all the motions of loading and firing. As often as a black man fell the spectators groaned, but when a white man bit the dust they cheered loudly. When, finally, all the whites took to ignominious flight, the delight of the audience was unbounded; they were so wrought up that a feather's weight would have turned the sham fight into a real one."

The drama, of course, at once suggests itself as the civilized man's substitute for such scenes as this, since its social significance is incontestable, yet with limitations such as we found operative in the dance. As among savages the inspiriting war dance and those whose effects are comic or sexual occupy a large place, so in our theatre the effort to transform the drama into an exclusively social and moral agent is impracticable. The complaint that our stage, instead of being the exponent of lofty ethical standards, caters too much to frivolous tastes, and tickles too much the popular palate for comic effects, is just as applicable to

the savage and his dance, if it were intelligible to him. The dual purpose of dramatic art—setting before the eyes a complete ethical and social standard, and at the same time not scorning to supply amusement pure and simple—will be better understood as time goes by, and is not likely to alter, despite all cavils. Yet there is truth in the warning, and the ideal side of the drama does need to be fostered and emphasized at present, since in much of the material now offered it can not be said to assert itself (omnia præclara tam difficilia, quam rara sunt). But civilized people have besides the drama a number of other displays, whose social effect is by no means to be despised. I need only suggest the universal testimony of historians to the enormous influence exerted by the Greek games on their national sentiment, to the effect on the populace of public processions culminating in the Roman triumphs, and the patriotic significance of our own gymnastic and song festivals and competitive contests.

The study of epic poetry reveals a somewhat different picture. While with us, for adults at least, enjoyment of an epic is conditioned on its perusal, inferior peoples have access to it only through the medium of a recounter, whose words and gestures are followed by the crowd with the greatest interest. Renowned deeds of hunters and warriors, tales and sagas celebrating the strength and skill of ancestors, relating animal adventures, and dwelling on the triumph of strategy over brute force, form for a large percentage of the human race the essence of the recounter’s art. And without pedagogic aids a clear ideal of the social excellence proper to his tribe is brought before the hearer’s imagination, and exerts an incalculable influence on his thoughts and volitions. This powerful effect of epic poetry grows with culture and with the consolidation of the treasury of tribal tradition into such forms, as witness the Homeric poems in their influence on the Hellenes. Among moderns, however, the recital of poetry has ceased almost entirely to be a form of social play since the introduction of printing, yet its social effect is decidedly augmented, for under present conditions a hundred thousand readers at once experience the same feelings and respond to the same ideals. Yet the enjoyment is not simultaneous and *en masse*, so to speak, and therefore transcends our subject.

Finally, we must touch cursorily on the contribution of the other arts to the social order, so far as they make use of inner imitation. Music was mentioned in connection with dancing, and earlier still with the intoxicating effect of rhythmic succession of tones. It is not a matter of surprise, then, to find that a festive gathering of social groups is almost unthinkable without the inspiration of music in some form, or that even on serious occasions, yes, even on the battlefield itself, the inspiriting exuberant charm of this art is appropriated for every sort of

social purpose. Of the other arts, architecture is most applicable to our subject. It is true that from a social point of view the influence of sculpture and painting is well worthy of consideration, but both these arts are most effective when subservient to architecture. The massive arch is so familiar as an impressive symbol of social unity that a mere mention of it is sufficient—the more as in it the playful character of æsthetic observation is to a great degree subordinate.

PART III

THE THEORY OF PLAY

HAVING reviewed the extensive field of play and its systems, the task now remains of collecting the results and important conclusions thence resulting. To this end the conception of play must be viewed from different standpoints: on the one hand that of physiology, biology, and psychology, and on the other a more definitely æsthetic, sociological, and pedagogical view.

1. *The Physiological Standpoint*

In the attempt to find a "common-sense" explanation of play we are confronted by three distinct views, none of which science should neglect. The first says: When a man is "quite fit," and does not know just what to do with his strength, he begins to sing and shout, to dance and caper, to tease and scuffle. "Jugend muss austoben, der Hafer sticht ihn"; "He must sow his wild oats"; "Il n'a pas encore jeté sa gourme." All these sayings recognise the necessity for some discharge of such superabundant vigour. The second view is diametrically opposed to this one, regarding play as it does in the light of an opportunity afforded for the relaxation and recreation of exhausted powers. As the strings of a zither and the cord of a bow should not always be taut if the instrument is to retain its usefulness, so do men need the relaxation of play. The third view emphasizes the teleological significance of play. Observation of men and animals forces us to recognise its great importance in the physical and mental development of the individual—that it is, in short, preparatory to the tasks of life. Every effort made to arouse and foster a feeling for play among our people is based on the conviction, *pro patria est, dum ludere videmur*.

The physiological theory of play is derived mainly from the first of these views —namely, that of surplus energy.[646] Schiller was its first exponent in Germany, when he accounted for play by calling it an aimless expenditure of exuberant strength, which is its own excuse for action. But Herbert Spencer, in his Principles of Psychology, first attempted a scientific formulation of the theory. It is characteristic of nerve processes, he says, that the superfluous integration of ganglion cells should be accompanied by an inherited readiness to discharge. As

a result of the advanced development of man and the higher animals they have, first, more force than is needed in the struggle for existence; and, second, are able to allow some of their powers longer periods of rest while others are being exercised, and thus results the aimless activity which we call play, and which is agreeable to the individual producing it.

A further question, which is not sufficiently provided for in Spencer's elucidation, depends on the physiology of this theory. Since we find that each species of higher animal has a kind of play peculiar to itself, we must try also to explain the origin of such varied forms of activity, all serving to relieve the tension of superfluous energy. Spencer does indeed attempt to make his theory of imitation cover all this, but a close examination proves it to be inadequate to the task. His idea is that imitation of one's own acts or of those of adults of the race determines the channels for overflowing energy. The former supposition might be tenable on the supposition that the child's first experimentation is not playful but intentional repetition, which is not the commonly accepted meaning of imitation. Spencer himself, however, seems to find imitation of models more general among children, since he expressly says that their play, as they nurse their dolls, give tea parties, etc., is a distinct dramatization of the acts of adults. This view, as I have tried to prove in my earlier work, can be applied with assurance to but one department of play, and consequently the origin of special forms must find some other explanation. Imitation, then, in its ordinary sense, can not be the universal criterion of play.

The question, therefore, as to the origin of special forms of play must be answered in some other way, and Spencer himself points it out when he says that the actions imitated in play are exactly those which are important in the subsequent career of the animal, and when in pursuance of this idea he refers to the robbing and destroying instincts which play satisfies in a manner more or less ideal. Here we meet again with the thought which has, indeed, hardly ever been absent in this inquiry, and which I regard as a most fruitful one. Not imitation, but the life of impulse and instinct alone, can make special forms of play comprehensible to us. The surplus-energy theory assumes in the higher forms of life a series of inborn impulses for whose serious activity there is often for a long time no opportunity of discharge, with the result that a reserve of exuberant strength collects and presses imperatively for employment, thus calling forth an ideal satisfaction of the impulse, or play.

A wide range can not be denied to the theory thus set forth, especially when we consider youthful play with its ebullient vigour which has scarcely any other

outlet. The movements of imprisoned animals, too, may be cited in its support, as well as the actions of men whose business does not give them enough physical exercise. Yet I think experience teaches us that superfluous energy, as Spencer conceives it, is no more a universal criterion of play than is imitation, since in many cases the inherited impulse toward prescribed reactions in certain brain tracts seems to be in itself a sufficient cause for play without the necessary accompaniment of superfluous energy. When a ball of cord is rolled toward a kitten, nothing more is needed to set her claws in motion than in the case of a full-grown cat that starts up at the sight of a mouse. And the same is true of a child whose imitative and fighting instincts are excited by whatever cause. When there is absolutely no external stimulus to supplement the creature's inborn impulses, only long inactivity of stored-up energies would lead to play; but, as there are thousands of such stimuli always at work, the Schiller-Spencer superfluous energy seems not to be a necessary or universal condition of play. It is of course a favourable but not an indispensable one, and therefore I regard not this but the inborn impulse as the keystone of an adequate system of play. It is true that we must assume in that case a flood tide in the affected tract as a result of the external stimulus, but this is quite a different thing from the view whose validity we are contesting. If, then, a condition of superfluous energy is a favourable though not indispensable one for play, we must endeavour to find its supplement, and this brings us to the second popular idea, which under the name of the theory of recreation has found its most scientific champion in Lazarus. Its fundamental principles are quite simple. When we are tired of mental or physical labour and still do not wish to sleep or rest, we gladly welcome the active recreation afforded by play. At first blush it seems to lead to a conclusion directly opposite to Spencer's, according to which play squanders superfluous energy, while here it appears as the conserver of it; there it is an irresponsible spendthrift, here the provident householder. Yet, as I have pointed out in my earlier book, this opposition is more apparent than real; that, indeed, the recreation theory is often supplementary to the Spencerian. "When, for example, a student goes to have a game of tenpins in the evening, he thus tones up his relaxed mental powers at the same time that he finds a means of relieving his accumulated motor impulses, repressed during his work at the desk. So it is the same act that on the one hand disposes of his superfluous energy, and on the other restores his lost powers." So far as this is the case this theory is a valuable supplement to the Schiller-Spencer idea, but is, of course, incompetent to explain play which transcends its limits.

Close inspection, however, will show that even this statement has its limitations,

and that the recreative theory has, after all, an independent sphere of activity. When, for instance, the conditions point to an active recreation, superfluous energy pressing for discharge seems no longer indispensable; a moderate normal energy is quite adequate for its demands. It is a striking fact that the new recreative activity is often closely related to the work of which we are weary. Fresh objects, varying the direction of our efforts, a slight change in the psychophysical attitude, are often sufficient to dispel the sense of fatigue. Thus, while it may be futile to direct the memory, worn out with prolonged service on some difficult subject, to other objects, yet turning it toward new circumstances connected with the same subject may restore it to its original vigour.[647] Recreation may even be achieved by changing from one scientific book which wearies us to another, perhaps quite as abstruse, but dealing with different phases of the subject; and after an interval the first may be taken up again with renewed interest. Steinthal is right when he says that change of occupation, involving the use of the same limbs, rests them.[648] The mountain-climber who has toiled up steeps, gains new strength, or at least loses his fatigue, by walking on a level. The acrobat who has tired his arms by difficult exercise on a bar tries pitching as a change, and presently returns to the first with comparative freshness. The swimmer who has been swimming for a long time in the usual position rests himself by taking a few strokes on his back, and so on.[649]

We occasionally find, too, that the recreation theory is very useful in determining the status of a play to which the Spencerian theory is inapplicable. With the student playing skittles in the evening the two theories represent the negative and positive sides, of one and the same process; but if he feels inclined to participate in some game involving the use of his mental powers alone, the recreation idea is noticeably predominant. A principle is operative here which may go far to fill the gap to which we have referred. While the theory of surplus energy accounts for play in thousands of cases, especially in childhood, when there is no need for recreation, this need may also produce play where there is no surplus energy. This is chiefly illustrated by adults.

Although we are still a long way from a satisfactory explanation of play, a step toward rendering it intelligible is gained in the fact that play is often begun in the absence of superabundant energy. But we find on further examination that a game once begun is apt to be carried on to the utmost limit of exhaustion—a fact which it is superfluous to illustrate, and which is inexplicable by either of the theories in question. An appeal in this dilemma to the physiological standpoint reveals two possibilities. Let us recall first the tremendous significance of

involuntary repetition to all animal life, for just as the simplest organisms in alternate expansion and contraction, and the higher ones in heart beats and breathing, are pervaded by waves of movement, so also in the sphere of voluntary activity there is a well-nigh irresistible tendency to repetition. Because of this tendency of reactions to renew the stimuli, Baldwin calls them “circular reactions.” Perhaps the child first produces them quite accidentally, then he repeats his own act, and the sensuous effect of the repetition furnishes the stimulus for renewed effort. When prohibition breaks this chain it does not as a rule effect complete cessation at once.

In our busy life, occupied as it is with the struggle for existence, we see substantial aims before us which we wish to realize as soon as possible, and we have not time to yield to this impulse to repetition; but we realize its power when a man steps aside from his strenuous business life. Psychiatry, too, furnishes us with pathological examples; some forms of mental disease are marked by continual repetition of some exclamation or act. One woman murmured constantly all day long, “O Jesus, O Jesus!” while another patient ladled nothing indefatigably from an empty dish; and a third scratched himself so persistently in the same spot that serious wounds resulted. To the same category belong the automatic and persistent movements of hypnotic subjects. If the arm of one of them is forcibly stretched out, he shows a disposition to repeat the movement, and often keeps on doing it, as children do, for some time after a positive command to the contrary.[650] Something similar to this occurs when a great grief or a great joy separates us for a time from our everyday life, and we mechanically repeat a single exclamation or trivial act.[651] The intoxication of love among birds is a very clear and beautiful illustration of this phenomenon. Bell birds are said to repeat their wooing call so long and so ardently that they have been known to fall dead from exhaustion.

Play, too, furnishes a similar distraction from the commonplace world, and after this inquiry we are able to understand why it is persisted in to the point of exhaustion. Especially is this the case with children, who more readily and completely lose themselves in present enjoyment.[652] Every one who has had much to do with these little people will recall with feelings of not unmixed pleasure how everlastingly the small tyrants insist on hearing the same story over and over, and playing the same games. Fighting and movement games are invariably begun again as soon as the children can get their breath, and some kinds of experimentation are even more faithfully repeated. “When a child strikes the combination required,” says Baldwin, “he is never tired working it. H

—— found endless delight in putting the rubber on a pencil and off again, each act being a new stimulus to the eye. This is specially noticeable in children's early efforts at speech. They react all wrong when they first attack a new word, but gradually get it moderately well, and then sound it over and over in endless monotony."[653]

This impulse toward repetition is doubtless the physiological reason for carrying on play to the utmost limit of strength. The second point to be noticed is the trance-like state resulting from such repetition of some movements, and sometimes with the added influence of rhythm.[654] The child who leaps and hops about or runs with all his might, or scuffles with his companions, is seized with a wild impulse for destruction; the skater and bicyclist, the swimmer sporting in the waves, and, above all, the dancer, whose movements are adjusted in harmony with the rhythmic repetition of pleasant sounds, are all possessed by a kind of temporary madness which compels them to exert their powers to the utmost. It is not an easy matter to determine the physiological basis of this intoxication of movement. Violent muscular contraction is not an essential, for in such passive motion as coasting, for example, the effect is strong, amounting sometimes to a sort of giddiness. Active motion is, of course, of more interest to us, since, in conjunction with the state of trance, the principle of circular reaction is then operative. Dancing is a kind of play calculated to augment this condition to the verge of the pathological. Read, for example, the description of the arrow dance of the Weddas in Sarasin's work and compare it with St. John's picture of the dancing dervishes of Cairo.[655] The harmless magic of play, however, is as different from such mad excesses as is the exhilarating effect of a glass of wine from the frenzy of drunkenness.

We may now sum up: There are two leading principles which must ground a physiological theory of play—namely, the discharge of surplus energy and recreation for exhausted powers. They may operate simultaneously, since acts supplying recreation to exhausted forces may at the same time call into play other powers and thus afford the needed discharge for them. In many cases, and especially in youth, the first principle seems to act alone, while on the other hand play may be solely recreative, without any dependence on a store of surplus energy. Further, it is important to notice two other considerations which throw light on persistence in play to the point of exhaustion. The first is circular reaction, that self-imitation which in the resultant of one's own activities finds ever anew the model for successive acts and the stimulus to renewed repetition. The second is the trance condition, which so easily ensues from such activity,

and which is practically irresistible.

The essential thing seems to be the demonstration of a theory of play entirely from a physiological standpoint, and not involving hereditary impulses. No more comprehensive explanation is known to me, and yet, in looking back over the ground covered, while it must be admitted that we have reached an advantageous point of view, still, on the other hand, the feeling naturally arises that these principles, loosely strung together, as they are, do not include the whole subject. Think of the play of children too young to go to school, for in such spontaneous activity, not yet enriched by invention or tradition, we have the kernel of the whole question. For a series of years we find life virtually controlled by play. Before systematic education begins, the child's whole existence, except the time devoted to sleeping and eating, is occupied with play, which thus becomes the single, absorbing aim of his life. Can we then be content to apply to a phenomenon so striking as this a physiological principle confessedly inadequate to cover it, although admirably adapted for application to some features of it? Does not its peculiar and inherent nearness to the springs of life and life's realities demand a complete explanation grounded on a general principle which is applicable at once to youth and to the play which lasts all through life? To answer this question an appeal must be made to the third popular conception of play, for a biological investigation alone can reveal the sources of human impulse.

2. *The Biological Standpoint*

In considering play from the biological standpoint we find two tasks prepared for us: first, a genetic explanation of play, and second, the appraisal of its biological value. The theory of descent whose scientific formula bears Darwin's name will be most useful to us in both undertakings. There is a steady and constantly increasing current against his teaching, and the opposition has taken a witty form, if not one dictated by good taste, in the saying that it is high time that biology recovered from its "Englische Krankheit." I think that this exaggerated depreciation is grounded in the just opinion that Darwinism does not unlock all the secrets of evolution. Scientific theories which explain everything they should explain are comparatively rare, particularly in the sphere of organic life, and I regard it as more than probable that an *x* and a *y* still remain to be calculated after Darwin's principle of evolution has done its best. But whether we shall soon find a better working principle is another question. It may even now be ripe or it may yet linger for centuries; perhaps it may never come in terms of thought

now known to us. For the present we have only the choice among metaphysics, Darwinism, and resignation. I, for one, then, regard the cavalier treatment of the Darwinian doctrine as a mistake, and still prefer to test special problems according to its light. Its two fundamental ideas are, first, evolution by means of the inheritance of acquired characters; and, second, evolution by means of survival of the fittest in the struggle for existence. The essence of the first (Lamarckian) principle is denied by many Darwinians, but, assuming that its influence is as strong as its advocates claim, we should then be forced to hold that the activity of ancestors wrought in the child hereditary predispositions. These ancestors, having made use of their sensory and motor apparatus all through their lives in every possible way, must have fought out many battles, conducted the chase, and connected themselves with social groups. Accordingly, we find in their descendants the impulses to experimentation, to fighting, chasing, hiding, social, and other plays. Schneider believes that the boy's strong propensity for catching butterflies, beetles, flies, and other insects, as well as that for robbing birds' nests, is attributable to the fact that his savage ancestors obtained their food supply by such means;[656] and Hudson says, in speaking of heredity in connection with certain bird dances, that if at first the habit had been found of expressing feelings of gladness by means of minuet steps, men as well as birds would be said to have an instinct for dancing the minuet.[657]

It is just along these lines that we may hope to estimate the biological value of play, and subsequently develop it in relation to our own view. But the assumption of the heredity of acquired characters and its wide application introduce a new element. It is difficult to understand, for example, how a habit originates whose physiological basis is confined to the acquisition of specified traits in the nervous system, which in their turn bring about changes in the germ substance of the organism, and appear in the offspring as hereditary paths for the tendency to repeat the same sorts of acts. If such a process is possible at all, it must be in the period of youth, when the organism still possesses great plasticity. Thus A. E. Ormann says, in an appendix to his German translation of Baldwin's Mental Development: "The last objection [the neo-Darwinistic], that organic structures, such as bones, horns, teeth, etc., are fixed and unmodifiable, I am not prepared to admit. I do not believe that these structures change in adult animals just as I do not believe that bionomic influences can effect important accommodations in them. Yet change and accommodation in these very orders are quite possible in the case of young animals still in the developmental period, and I am convinced that the majority of effective accommodations do originate at this very time, and that the possibility of their appearing diminishes as

maturity is approached."[658] If this should prove to be the fact, play would then have the task of maintaining a countless mass of hereditary impressions important to the preservation of life, and also of supplying a means for individual adaptation of the example of adults which through imitation and direct transmission gradually become hereditary possessions of the race.

But interesting as this point of view is, we find grave reason for doubting its reconcilability with the facts that we have already ascertained. First, there is the questionableness of the inheritance of acquired characters at all. Götter said long ago that common experience is all against it,[659] and Galton, too, is very skeptical in regard to it, if he does not flatly deny the possibility.[660] A. Weismann is, however, its chief opponent, and is therefore regarded as the leader of the neo-Darwinian school. How the inheritance of acquired characters can be entirely excluded from the struggle for existence is yet undemonstrated, but Spengel[661] has recently pointed out a notable series of adaptations which are independent of it. Indeed, in regard to the instincts which chiefly claim our notice, such a competent critic of neo-Darwinism as Romanes[662] is forced to admit that some quite complicated ones have attained perfection without the aid of the Lamarckian principle. These facts warn us not to attach too much weight to it.

Under these circumstances we must attempt an independent basis for our biological theory of play, since, if the Lamarckian principle is ruled out, only natural selection remains of the scientific hypotheses. To this as well just and weighty objections have been raised, and I may mention that selection in the Darwinian sense does not account for the origin of structures which are at first useless, nor how it comes about that the right selection occurs in the right place. To meet these objections Baldwin has advanced his Organic Selection and Weismann his Germinal Selection.[663] According to the former, the inheritance of acquired accommodations is unnecessary, their task being sufficiently accomplished if they keep the creature afloat in its natural environment until selection has time through favouring accidental variations tending in the same direction (coincident variations) to build up hereditary adaptations.[664] Osborn and Lloyd Morgan have reached a similar standpoint independently of Baldwin. Weismann, who in a surprising change of base abandons his former position on the all-sufficiency of Darwin's individual selection, extends the selective principle to the germ substance, which, in his view, does not consist of similar life-units, but possesses a sort of structure, the elements of which (the "determinants") already represent the respective parts of the future individual. Each "determinant" struggles for sustenance against its neighbours, so producing

a sort of germinal selection, in that the stronger among them has its development furthered at the expense of the weaker, transmits the force so acquired to the offspring, furnishes them in the very beginning of their career with a favourable footing in the struggle for life, and insures further progress in the same direction. Here, then, is the possibility of a specially determined variation grounded in the very existence of the germ substance,[665] and through the interaction of individual and germinal selection much is accomplished which the former could not alone achieve.[666]

The future must finally judge between these rival efforts to improve the old theory. Baldwin's organic selection, which has now been accepted by Wallace Poulton and others, may possibly be applicable to all cases of adaptation, though it has not yet been so widely developed by its author. The chief value of Weismann's new hypothesis is perhaps its luminous portrayal of the interaction of individual selection with special developmental tendencies in the germ substance, but the explanation of these tendencies themselves by means of a struggle for sustenance seems to find little confirmation. Here is probably an *x*, or possibly several unknown values. Yet the important part which selection plays in this exceedingly complicated process should not be underestimated. Nägeli has likened selection to a gardener who cuts away the superfluous growth of a tree, which then by its own inner processes forms its crown. But when we consider, for example, the wonderful mimicry, for whose striking external resemblances "inner" developmental tendencies could hardly suffice (whether with metaphysical hypotheses of pre-established harmony or of unity of will or consciousness), the skill and power of this "gardener" appear to be sufficient.

In the attempt to form a biological estimate of play independently of the Lamarckian principle we must constantly bear in mind the value and origin of youthful play, and therefore we must begin, with instinct in its more limited sense. We find in all creatures a number of innate capacities which are essential for the preservation of species. In many animals these capacities appear as finely developed reflexes and instincts, needing but little if any practice for the fulfilment of their function. With the higher animals, and above all with man, it is essentially otherwise. Although the number of his hereditary instincts is considerable—perhaps larger than with any other creature—yet he comes into the world an absolutely helpless and undeveloped being which must grow in every other sense, as well as physiologically, in order to be an individual of independent capabilities. The period of youth renders such growth possible. If it is asked why an arrangement apparently so awkward has arisen, we may reply that instinctive apparatus being inadequate for his life tasks, a period of parental

protection is necessary to enable him to acquire imitatively and experimentally the capacities adapted to his individual needs. The more complicated the life tasks, the more necessary are these preparations; the longer this natural education continues, the more vivid do the inherited capacities become. Play is the agency employed to develop crude powers and prepare them for life's uses, and from our biological standpoint we can say: From the moment when the intellectual development of a species becomes more useful in the "struggle for life" than the most perfect instinct, will natural selection favour those individuals in whom the less elaborated faculties have more chance of being worked out by practice under the protection of parents—that is to say, those individuals that play. Play depends, then, first of all on the elaboration of immature capacities to full equality with perfected instinct, and secondly on the evolution of hereditary qualities to a degree far transcending this, to a state of adaptability and versatility surpassing the most perfect instinct.

Our attention so far has been given mainly to special instincts, and their effects are extraordinarily widespread in both human and animal play. We have dwelt upon instinct as it is manifested in fighting, love,[667] and social plays, and in experimentation with the motor apparatus we are pre-eminently on instinctive ground. In sensory experimentation, however, the practice of inborn reflexes (they are gradually differentiated from instincts) is in the background. Ribot, however, designates both these processes as instinctive. Even in experimentation with the higher mental powers, practice in fixing the attention, which is an indispensable prerequisite of all experimentation, and indeed of all play, may be regarded as a motor reaction allied to instinct. On the other hand, as I have pointed out in the preface, the narrower conception of instinct is not suited to our purpose, and we therefore took the more comprehensive idea of hereditary impulse as the ground of our classification. We found the imitative impulse especially important here, and its far-reaching biological significance was dwelt upon in the beginning of the section on imitative play, and need merely be recapitulated.

The imitative impulse is an inborn faculty resembling instinct[668] whose first effect is to supplement instinct by means of individual acquirements; secondly, it preserves those race heritages which survive only through tradition. The first of these functions falls in the biological domain, while the second belongs to social play. The former may be advantageously observed in the world of birds, which learn the characteristic song of their kind by the help of playful experimentation to a great degree, but never get it so perfectly as when they hear the song of older birds as a model. Children, too, exemplify it clearly in the transition from

their lall-monologue to speech; in their tussling, where many of the movements are instinctive, but are materially assisted by imitation of older boys; in the nursing of dolls by little girls, who would probably not make any use of the instinct during childhood but for imitation; and in many other cases. Imitation is clearly playful in such instances, so far as it is both unconscious and unpractical.

From the biological standpoint, too, imitative play is an important agent in supplementing instincts, usually tending to render them more plastic, and thus further the opening of new paths for the development of intelligence. Therefore I believe that a general theory of play should keep this thought in the foreground; though under some conditions contrary effects ensue, since, under Baldwin's principle, imitation gives selection the opportunity to strengthen the hereditary foundations of the activity imitated. It seems to me that in imitative play of avowedly social character the impulse probably aids selection in its gradual upbuilding by means of the furtherance of coincident variations. I touch again upon this point (pp. 395 *f.*), and will only say here that the two views are not necessarily contradictory, since, while a weakening may take place in the details of the activity, there may be a strengthening of the accompanying feelings—these two elements being very different.

Besides imitation, many other natural impulses come into play, as we discovered in studying experimentation and the higher mental capacities. That the practice theory, too, is applicable we can plainly see. Practice in recognition, in storing up the material collected by memory, in the rise of imagination, reason, and the will, together with the ability to surmount feelings of pain, are all of the greatest, indeed of incalculable, value in the struggle for life. There is some difficulty in meeting the question of the relationship of experimental impulse in the higher psychic life, since, as I pointed out in the introduction to the first chapter, it is still a mooted question whether the assumption should be made of one general impulse to action which, according to circumstances, is directed now to this and now to that psychic discharge; or whether, by reviving the faculty theory, to speak of many central impulses, grounded in our psychophysical nature and pressing for expression as instincts do.

For my part, I incline to the opinion that such central impulses actually exist, though they are probably but vaguely defined. Long ago the attempt was made, especially by Reimarus and Tetens,[669] to include the idea of impulse among the higher mental processes, and the future may yet see this effort renewed. However that may be, there is unquestionably one such impulse which in its motor expression directly suggests instinct, and which in my opinion is directly

derived from it—namely, attention. But attention is an essential factor in all experimental play, and indeed in all play, of whatever character, and can therefore, in conjunction with the causal needs which so much resemble instincts, bring about results which would appear to require especial incentive to activity.

Raising this question brings me to another point which I have touched upon in my earlier work. While Schiller speaks of a single-minded play impulse, my own view is that there is no general impulse to play, but various instincts are called upon when there is no occasion for their serious exercise, merely for purposes of practice, and more especially preparatory practice, and these instincts thus become special plays. It seems to me unnecessary to suppose a particular play instinct in addition to all the others, and the fact that selection favours a long period of youth bears this out. When that is assured, and special physiological provision is made to secure it, then the merely ordinary instincts and impulses are quite sufficient to account for the phenomena of play. Still, if the demand is made for the same sort of impulses for all play, I point to attention and causality as expounded by Sikorski, and familiar to us in the joy in being a cause. The actual act of attention is, as before said, very close to instinct, and so-called voluntary attention is not widely different, since we find connected with many instincts phenomena which are influenced by the intelligence and will. Attention, too, is an impulse in that it urges to activity so long as it is not hampered by fatigue. When we complain of being bored, it is not because we have no experiences, but because the experiences are not sufficiently interesting to occupy our attention, and, since it is an active principle in all play, we naturally think of it in connection with the impulse to any sort of activity. Following attention we have pleasure in the production or effects appearing as another element in the general impulse to activity and exhibited more or less clearly in all plays that are connected with external movement. Nor is it wanting either in those which are ostensibly merely receptive, as we shall see. As the categorical standing of causality depends in all likelihood on hereditary capability, and as it first becomes prominent in a motor form—namely, in the active production of effects—we have here a further means of giving to the conception of a general play impulse a concrete form.

In conclusion, adult play must be considered from a biological standpoint. That the grown man continues to play long after he has outgrown the childish stimuli to play has been sufficiently shown in the foregoing chapters. Much of his play, and especially the sensorimotor experimental kind, is of but slight biological significance, though the practice theory is often applicable even in later life to

movement and fighting play, and still more so to social play, since the latter serves not merely as ontogenous practice, but is indispensable as well to phylogenetic development of the social capacities. Artistic enjoyment, too—that highest and most valuable form of adult play—is, as Konrad Lange has demonstrated, extremely influential biologically and socially. “Man’s serious activity,” he says, “has always a more or less one-sided character. His life consists, as Schiller has shown in his letters on æsthetic education, in a progressive alternation between work and sensuous pleasure. Indeed, in the various occupations of mankind, as a rule, but a limited number of the mental powers are employed, and these not fully so. Innumerable springs of feeling are hidden in the human breast untested and untried. It is plain that this would have a most disastrous effect on the whole race did not art supply the deficiency of stimulus.... Art is the capacity possessed by men of furnishing themselves and others with pleasure based on conscious self-illusion which, by widening and deepening human perception and emotion, tends to preserve and improve the race.”[670] Schiller’s famous saying—that a man is fully human only when he plays, thus acquires a definite biological meaning.

One word more: If the Lamarckian principle be adopted, the play of adults has a still more specialized significance, since, as it would be essential to a well-rounded culture, its office as preserver of hereditary race capacities[671] is obvious, especially as these require a gentle fostering, not to hamper individual adaptation, and yet preserve the fundamental aim of all adaptation. Since, however, caution forbids our using the Lamarckian principle, I content myself with the mere mention of this possible effect of it.

3. *The Psychological Standpoint*

Here in the first place we are called upon to apply a psychological criterion to playful activity. Wundt, in his lectures on the human and animal soul, suggests three such criteria: first, the pleasurable effect; second, the conscious or unconscious copying of useful activities; and third, the reproduction of the original aim in a playful one.[672] As I have said before, I do not regard the second of these—namely, imitation—as universally a mark of play. Wundt says that an animal can play only when certain memories which are accompanied by pleasurable feeling are renewed, yet under aspects so transformed that all painful effects vanish and only agreeable ones remain; the simple and spontaneous play of animals being, so to speak, association plays. Thus the dog, at the sight of another dog which displays no unfriendly feeling toward him, just as naturally feels a disposition to the agreeable exercise of his awakened powers as to fight with his fellows.[673] Kittens which for the first time try to catch a moving ball, are not playing according to this view, and only play when the action is repeated for the sake of the pleasure it gives. I shall return to this conception, which includes more than simple imitation in its ordinary sense. I feel that I have not succeeded in conveying all that Wundt means in the passage cited from. However, if I understand him aright, he attempts in the last edition of his published works to explain imitation in quite another way. Thus he gives that name to the play of young dogs, which, without having seen it done, seize a piece of cloth in the teeth and shake it violently, because such play exhibits the playful activity of former generations.[674] This is a hardly justifiable use of the word, and I think it better to admit at once that imitation, as commonly understood, is not a criterion of play.

The case is entirely different with the “apparent aim” or sham activity. It is undeniable that, objectively considered, such play appears to be detached from the real, practically directed life of the individual, and Wundt, too, understands it so. No one plays to attain what is a real object of effort outside of the sphere of play. All the objects of play lie within its own bounds, and even games of chance keep in view the aim to promote strong excitement in the parties to the wager until the decision. Since, then, we must consider sham activity as a genuine projection from earnest life, it becomes a universal criterion. This is not contradicted by the fact that playful activity is of great value to the individual, since the value of the play is not the player’s motive.

The question respecting the illusion-working character of playful activity is

much more difficult to meet, if the psychical processes of the playing subject are kept in view, and the inquiry is pressed as to whether the actual sham quality of the play is reflected in his mental states.[675] Here it must be emphasized that actual consciousness of fulfilling a merely ideal purpose, of being engaged in sham occupation, is not at all essential to imitative play, and is wanting altogether in experimentation and fighting plays. Consequently it too fails as a universal criterion of play. Later we shall inquire whether in much play the objective sham character may not influence the psychic condition of the player in another way.

There remain, then, as general psychological criteria of play, but two more of the elements popularly regarded as essential—namely, its pleasurableness, and the actual severance from life's serious aims. Both are included in cally speaking, in activity performed for its own sake.

I proceed after this introduction to inquire into the character of the pleasure derived from play. It is the most universal of all the psychological accompaniments of play, resting as it does on the satisfaction of inborn impulses. The sensorimotor and mental capacities (of the latter, attention pre-eminently) fighting and sexual impulses, imitation, and the social instincts press for discharge, and lead to enjoyment when they find it in play. To this simple statement of fact we must subjoin the not unimportant consideration which Baldwin has suggested in his preface to The Play of Animals. He distinguishes two distinct kinds of play: one "not psychological at all," and exhibiting only the biological criterion of practice for, not exercise of, the impulse; and the other, which is psychological as well and involves conscious self-deception.[676] The situation, he says, is like that displayed in many other animal and human functions which are at once biologic and instinctive, as well as psychologic and intelligent; for example, sympathy, fear, and bashfulness. This last statement is unquestionable, but there is room for doubt whether the previously assumed difference exists. Baldwin's grounds for the distinction seem to me to be inconclusive, in that conscious self-deception is by no means the only nor the most universal psychic accompaniment of play, the most elementary of them all being the enjoyment derived for the satisfaction of an instinct, which makes play an object for psychology, where conscious self-deception is out of the question.[677] But the further question is suggested whether the biological conception of play has not a still deeper grasp than the psychological, and to this extent the proposed distinction is of value.

It may be assumed of young animals, and probably of children, that the first

manifestations of what is afterward experimentation, fighting and imitative play, etc., is rarely conscious, and consequently we can not assert with assurance that it is pleasurable. Therefore the biological but not the psychological germ of play is present. It was in this sense that I intended my previous remarks to the effect that actual imitation was not an indispensable condition of play, while repetition possibly could be considered so, since the impulsive movements must be repeated frequently and at last performed for the sake alone of the pleasure derived from them, before play ensues. This marks the psychological limits of play.

To make the relation clearer, let us take the grasping movement as an example. The child at first waves his hands aimlessly, and when his fingers chance to strike a suitable object they clutch at it instinctively. From a purely biological point of view this is practice of an instinct, and play has already begun. Psychologically, on the contrary, it is safer to defer calling the movements playful until, through repetition they acquire the character of conscious processes accompanied by attention and enjoyment. This distinction, I think, is a proper one, and it enables the biologist to pursue the idea further than the psychologist would be justified in doing. Therefore I can not recognise any activity as playful in the most complete sense which does not exhibit the psychological criterion as well. Examples of such plays may be found scattered all through the systematic parts of this work, and at the beginning of the section on contact plays.

In examining somewhat more closely the nature of the feeling of pleasure which springs from the satisfaction of an inborn instinct we may assume as a general law that it is threefold: first, there is pleasure in the stimulus as such; then in the agreeableness of the stimulus; and, third, in its intensity. The first is due to the fact that a set of hereditary impulses press for such expression; it is superfluous to attempt to prove that there are special stimuli inherently pleasurable; it is only the third class, then, that need demand our attention, and this we have repeatedly encountered in our excursions into the various departments of play. It would be well worth while to devote a monograph to the investigation of its meaning and grounds in the light of the literature of the past. Probably a variety of causes would be brought to light, among which, however, the influence of habit would be prominent, since attention and enjoyment would need constantly stronger stimuli. The most valuable contribution to the subject seems to me that of Lessing in pursuance of Du Bos’s idea. He says that the violent emotion produced by the feeling of heightened reality is the occasion of the pleasurable effect. But whence comes this feeling? Its origin is sufficiently clear in

movement-play, where intense stimulus is connected with the violent exertion of physical powers; but how is it with receptive play? In the eighteenth century it was said, on the ground of Leibnitz's psychology, that what we regard as receptive play was the soul's spontaneous activity. The strong emotion resulting betokened a development of force which is always a satisfaction. This view quite naturally lends itself to modern psychological terms now that we can put our finger on the strong internal motor processes involved; yet it is limited by observation, which shows that intensive stimuli taking possession of us, so to speak, in spite of ourselves, are not invariably cherished as pleasures. Only when we voluntarily seek the strong feeling, and gladly yield ourselves to it so that the emotion it produces is in a measure our own work, do we enjoy the result. The conditions are the same as with the pleasure in power displayed in violent movement plays, and they may be treated together.

Among the many inborn necessities which ground our pleasure in play we find again that three is the number emphasized by psychology—namely, the exercise of attention, the demand for an efficient cause, and imagination. As regards attention, I have already said in the biological discussion that it seems calculated to lend a definite meaning to the vague idea of a general need for activity. The examples of practice in attention which were introduced in the section on experimentation with the higher mental powers were chosen with a view to illustrating mental tension, and special stress was laid on the fact that, apart from these limitations, attention is of the widest and most comprehensive significance. Indeed, fully developed play in the psychological sense is scarcely conceivable without the simultaneous exercise of motor or theoretic attention. From the first sensory and motor play of infants, straight through to æsthetic enjoyment and artistic production, its tension is felt, and when the opportunity is not afforded for its satisfactory exercise a pitiable condition of boredom ensues, the unendurableness of which Schopenhauer has so exhaustively described.

The desire to be an efficient cause also has a motor and a theoretic form. We demand a knowledge of effects and to be ourselves the producers of effects, and it is through this motor form that the theoretic, if not exactly originated, is at least perfected. Hence the root idea of causal connection depends on volition, and Schopenhauer, in referring force to the will, has but expressed in his metaphysical way an established psychological fact. This motor impulse finds expression in the joy in being a cause, which I regard as so essential to play, and in conjunction with attention is probably the source of the impulse for activity of which I have spoken. We must bear in mind all the forms of pleasure connected with movement, and especially motor experimental play, where, besides the

mere enjoyment of motion in itself, there is the satisfaction of being one's self the originator of it, the joy-bringing sense of being a cause. Use of the sensory apparatus is a source of the same pleasure, since here, too, a motor condition is involved, and is accompanied with consciousness of its own activity; and when the inner imitation which we have described is also included, the connection with external movement is of course still closer. And in any case joy in being a cause is well-nigh universal, since in play no purpose is served apart from the act itself as impelled by inner impulse, which thus appears in the character of an independent cause more than in any other form of activity.

This joy in being a cause is susceptible of varied modification. In violent movements, and even in the receptive enjoyment of intense stimuli, it is converted into pleasure in the mere possession of power, and is proportionate to the magnitude of the results. It appears also in the form of emulation when a model is copied, and in imitative competition, the pleasure of surpassing others arises with enjoyment of pure success and victory, which, as we have seen, results as well from overcoming difficulties as from the subjugation of foes. All these ideas have been so often encountered in the systematic part of our work that merely directing them to their natural conclusions is all-sufficient here.

Of imagination, however, we must speak in greater detail in regard to its illusion-making power, which again brings us to the sham occupation recognised as such by the doer in a partly subjective manner. I am careful to limit this statement because it is evident that only a simple form of the phenomenon, and not its whole content, is present in such reflex forms of consciousness.

In many games there is a veritable playing of a rôle in which the players, like actors, are quite conscious all through the pretence that they are only "making believe." It is a genuine conscious state in which, on the one hand, the illusion is perfect, while on the other there is full knowledge that it is an illusion. Konrad Lange has called this condition one of conscious self-deception, a term which most aptly conveys the idea of the strange contradiction of inner processes. He limited the use of the term, however, to plays that depend on the imitative arts, while I have advanced the view in my Play of Animals, that it is even more clearly exhibited in such fighting and hunting plays as are conducted independently of models, than in actual imitative play. But when it comes to human play I am forced to admit that speech discloses conscious self-deception in the imitative play of children where it might be doubtful in the case of animals.[678] Still, I have other points of controversy with Lange. If imitation includes the conscious repetition of our own previous acts, as it may by an

extension of the definition, then we are warranted in assuming conscious self-deception only with it. Thus, in fighting play, for instance, clear consciousness of playing a rôle can ensue only when previous experience has taught the players what are the serious manifestations of the fighting instinct. If, however, the narrower use of the word is adopted, illusion is more extensive than imitation, and, furthermore, the latter may exist without the former.

When, as I said before, there is a clear consciousness of sham activity, we may subscribe essentially to Lange's theory, with its oscillation between reality and appearance, since the enjoyment of illusion does alternate with the impression of reality. His figure of the swinging pendulum should not be taken too literally as implying measured regularity in the succession of states.[679] The essence of his meaning is that in self-illusion which is conscious, even the moments of most absolute abandon are followed by other moments of readjustment, and this is undeniably the case. Think, for instance, of the laughter of romping boys which serves to reassure the combatants by its implication that, in spite of appearances to the contrary, the fight is only playful.

But this does not fully explain the illusion of the players. Just as in æsthetic enjoyment we are for a long time entirely surrendered to the illusion without consciously recognising the fact, so we find in play, and especially that of children, absorption and self-forgetfulness so complete that no room is left for the idea of oscillation. And when the illusion is so strong and so lasting, as is sometimes the case with little girls nursing their dolls, or with little boys playing soldier or robber, they can no more be said to see through the illusion than to alternate between it and reality. My own contribution to the solution of the problem is set forth in my earlier work in the section on hypnotic phenomena, more exhaustively than is possible here, where the points of view are so much more varied. I therefore content myself with the following partial elucidation:

If we may not assume consciousness of the illusion in complete absorption, nor yet any true alternative with reality, we are forced to the conclusion that the appearance produced by play differs essentially from the reality which it represents, and is incapable of producing genuine deception. Now this postulate seems to be borne out in a very obvious and striking manner by the fact that sham activity and the pretended object are evidently symbolic, since they are never perfect duplicates of reality. Toward the most perfect imitation the playing child entertains feelings quite different from those called forth by a living creature. How, then, is there positive deception? But closer examination shows us that the solution is not so simple. If such external distinctions alone separated

playful illusion from actual deception, the force of the former would inevitably decline as this difference increased. But the facts indicate exactly the contrary, as we may see illustrated by the little girl who takes a sofa pillow for a doll; the illusion is at least quite as great as when the toy is a triumph of imitative art. The child actually approaches the hypnotic state when she says that the pillow is a lady on the sofa, and chats with her. Though there is of course no actual deception, the reason for it must be looked for elsewhere than in any external difference from reality.[680]

I believe its true basis to be the feeling of freedom which is closely connected with joy in being a cause. Not the clear idea, “This is only pretence,” but a subtile consciousness of free, voluntary acceptance of the illusion stamps even the deepest absorption in it with the seal *ipse feci* as a safeguard from error. If we accept E. von Hartmann’s æsthetic principle that to the consciousness which is sunk in illusion the apparent I is different from the real I of ordinary waking consciousness, then in illusion play the real I is supplanted by the apparent I. Yet pleasurable feelings which belong properly to the obscured real I may come over into the sphere of the apparent I and lend to it a specific character. As in the contemplation of beauty, enjoyment of sensuous pleasure passes into the sphere of apparent feeling, and lends to the object that regal brilliance which characterizes pure beauty, so in the wider field of illusion play, genuine pleasure in the voluntary transference to that world of appearances which transcends all the external aims of play, enters into the sham occupation and converts it into something higher, freer, finer, lighter, which the stress of objective events can not impair. This effect of the feeling of freedom may advantageously be made the subject of personal observation. Before going to sleep at night it is easy to call up all sorts of faces and forms before the dosed eyes and play with them, but as soon as the wearied consciousness lets slip the sense of being the cause of it all, we shrink from these phantoms, and playful illusion takes a serious turn.

Finally, through the feeling of freedom, the recreation theory attains a special psychological significance which is quite generally recognised. As soon as the individual has progressed far enough to realize the seriousness of life (and this probably happens in an unreflective sort of way to children too young to go to school) the liberty of play signifies to him relief from this pressure. The more earnest is a man’s life, the more will he enjoy the refuge afforded by play when he can engage in sham occupations chosen at will, and unencumbered by serious aims. There he is released from the bondage of his work and from all the anxieties of life.

4. *The Æsthetic Standpoint*

While it is true that undue emphasis of the overflow of energy reduces play to self-indulgence, at the same time it is unfair to art to make too prominent its kinship with play. This is just the position of Guyau in his æsthetic writings; yet he is far from denying the kinship, and I think that he would have concurred to a great extent in Schiller's view if he could have convinced himself of the biological and sociological importance of play by adequate investigation of its phenomena. I at least have been confirmed in my conviction of the close connection between play and æsthetics by the perusal of his book, and there, too, my view stated in the very outset—namely, that this connection obtains in a higher degree than does that between play and artistic production—is also supported by his more thoroughgoing investigation of the facts.

The following points present themselves as the most general results of our observation of æsthetic enjoyment. We have found that all sense organs display numerous impulses to activity, and consequently enjoyment of the response to stimuli is a universal basis of play, varying as to conditions and the quality of the stimuli. Now, since every æsthetic pleasure (except the appreciation of poetry) is connected with sense-perception, we find in it a genuine source of enjoyment, depending on the origin and quality of such perception. Observation merely for its own sake is the lowest form of æsthetic enjoyment, and is so far identical with sensuous play.

On this foundation arises enjoyment of special stimuli. Confining ourselves to sensory play, we can distinguish two groups—namely, sensuously agreeable stimuli and intensive ones. The former, provided higher æsthetic observation does its work of personification, finds its sole object in beauty. Pleasure in intense stimuli is strong enough to subdue the pain which is commonly associated with it, and forms an introduction to enjoyment of what is grotesque, striking, and tragic. It is especially prominent in the trancelike state so common in movement-play as well as in æsthetic enjoyment.

Before going further we must pause to consider the idea so often advanced that such enjoyment is peculiarly the prerogative of the higher senses. Is the pleasure which I feel when I inhale a perfume as much æsthetic as is the perception of beautiful colour? I think the case is like that of the common idea of play. From a psychological standpoint we recognise as such any act that is practised purely for its pleasurable effect, and sham occupation in the higher forms of play may be subjective. Therefore we can affirm that pleasure in perception as such, and not

necessarily in agreeable perception, grounds it, and to this extent no one can demur if the beautiful colour is classed with the pleasant odour. For the utmost æsthetic satisfaction, however, more than this is requisite—first, definite form, and second, richer spiritual effect—and since these are perceptible only to the higher senses, it becomes their exclusive prerogative to take in the utmost effects of artistic effort.

To resume our review, we observe that æsthetic enjoyment is not merely a playful sensor experience, but manifests as well the higher psychic grounds of perception. What we said of the pleasure of recognition, the stimulus of novelty, and the shock of surprise need not here be repeated. Illusion remains the most certain mark of higher æsthetic enjoyment, and the important psychological problem connected with it which was referred to in the preceding section has its application here as in other illusion play. The first thing to notice about it here is that it consists partly in the transference of thought from the copy to an original,[681] and that sympathy and the borrowing of qualities which are connected with imitation have also their parts to play. Bearing all this in mind, we are in a position to put the question next in order, What is the principal content of illusion?

Thus we arrive at a point similar to that reached in our study of sensory plays. As the pleasure in stimulus as such surpasses the pleasure in any particular form of stimulus, so here the subjective activity of inner imitation as such is a source of pleasure quite apart from the qualities inherent in the thing copied. Lipps says, in his notice of my Einleitung in die Aesthetik, that for me the æsthetic value of the object under observation and personification is not that it is personified, but that it is I who personify it. Part III of the book proves the injustice of this to my general view, yet I do maintain that inner imitation is as such accompanied by pleasurable feelings,[682] and consequently that æsthetic satisfaction possibly finds its first limit when any painfulness connected with the subject outweighs the enjoyment derived from inner imitation.

If, then, the act of inner imitation is in itself pleasurable, it strikes me as self-evident that the degree of satisfaction attained must be proportional to the value of its object. This is clearly illustrated by the highest character of æsthetic intuition, the impression of vital and mental completeness; and inner imitation shows this, for it delights to act in response to the functions of movement, force, life, and animation. Therefore Lotze is right when he says, after approving the limitations which we have pointed out, “No form is too chaste for the entrance and possession of our imagination.” On the other hand, it is evident that the

value of this indwelling depends essentially on the peculiarities of the subject. If, for instance, I transform myself into a shellfish and enter into its sole method of enjoyment, opening end shutting its shell, I experience a far narrower sort of æsthetic satisfaction than when I feel with a mother who is caressing her child. It is just because inner imitation is involved that the value of the æsthetic effect is determined by the qualities of the object. But what are the qualities, it may be asked, which augment or detract from this effect? An exhaustive and satisfactory answer to this question is impossible here; such is the extraordinary variety of the contributory factors. It properly belongs, too, to specialized æsthetics. In general, however, it is safe to say that we enjoy imitating what produces agreeable, and intense feelings, and we thus find again on higher ground the same conditions which we encountered in sensory play. This distinction is clearly brought out by Lipps in his article on the impression made by a Doric column: "The mechanical effects which are 'easily' attained remind us of such acts of our own as are accomplished without effort or impediment, and likewise the powerful expenditure of active mechanical energy recalls a similar output of our will power. In the first case a cheerful feeling of lightness and freedom results; in the other no less agreeable sensations of our own vigour."[683] In other spheres the value of such indwelling seems to me to be chiefly in the two directions which Schiller has indicated in his comparison of "grace" and "dignity." I would refer again in this connection to what has been said about the importance of poetic enjoyment; if we are right in assigning love and conflict as its chief motives, then here too enjoyment of agreeable and intense stimuli is prominent.

If we ask, finally, how æsthetic enjoyment extends its sway beyond the entire sphere of play, we encroach on the ethical bearings of art. With the introduction of an element of moral elevation and profound insight into life, æsthetic satisfaction ceases to be "mere" play and transcends our present subject. But we must be careful to maintain that it is transcendence and not exclusion, for even when (as is possible to a Shakespeare and a Schiller) the intent toward moral elevation and profound insight is prominent, our enjoyment remains æsthetic only so long as these effects are developed and set forth in connection with playful sympathy.

Our second leading question is that of the relation between play and artistic production. Let us set out by announcing at once that the latter, especially in highly developed art, is further removed from play than is æsthetic enjoyment. This is implied in the fact that, for the genuine artist, practical application of his aptitude is, as a rule, his life's calling; not necessarily his only means of support,

of course, but sufficiently absorbing to force the man of creative ability to devote most of his life to an end which to the mass of mankind seems unworthy of serious effort. In such a case art ceases to be playful. But this transformation is not unique. That absorption in an apparently useless form of activity which is so incomprehensible to the average man, but which easily lures its votaries to rapt enthusiasm for their art, is displayed in many forms less exalted than the striving for an ideal. Plays not connected with art hold despotic sway over their victims. Many devote their life's best effort to some forms of sport, and others to mental contests, such as those of chess, whist, etc. E. Isolani says that when Zuckertort was a medical student in Berlin he accidentally became a witness of a match game between two fine chess players, and, although unfamiliar with the rules, he detected a false play. This interested him in the game, and he became a pupil of Anderson. Soon chess instead of medicine became his chief business in life; he thought of nothing but how to improve his play. It kept him awake at night, or, if fatigue overcame him, its problems pursued him in dreams. At twenty-four he was a worn-out man. The demoniac power with which art drives a man so predisposed resides in other games as well; and in this both activities cease to be pure play.

Another basis for our subject is found in the fact that art presupposes a useful field of application for technical skill whose acquirement and improvement are no longer ends in themselves. The acquisition is often a long and painful process, with little that is playful about it. But this is common enough in other play as well when the technical side of any sport is made the subject of serious study and effort.

Our third ground is to be sought in a very real aim, which is ever beckoning to the artist. It may be designated in a general way as the sympathetic interest of others, manifested in admiring recognition and appreciation of the powers displayed, or in subscribing to the convictions, views, and ideals of the artist. In so far as this is an effective motive, art is no play. Strictly artistic temperaments are especially liable to its influence at the beginning of their career. Indifference, when sincere, is usually a later development, the product of experience.

Having thus fortified our position against misconstruction, we are prepared to proclaim the proper relationship between artistic production and play. It seems to me to be more and more conspicuous as we approach the springs of art. The primitive festival, combining as it did music and poetry with dancing, had indeed a tremendous effect on its witnessers, and its manifestations were essentially playful. Skill acquired in childhood through playful practice was playfully

exhibited with original variations. The epic art, too, was playfully employed by the primitive recounter, with no indication of toilsome preparation or serious treatment, and the case is not widely different with what we know of the beginnings of pictorial art. So long as primitive sculpture served no religious purpose, simple delight in its use was much more prominent, since all inherited the capacity, and none was opposed to the mass as the exponent of a specialty. We meet the same conditions in studying the child's artistic efforts; his poetic and musical efforts as well as those in drawing are essentially playful. The idea of making an impression on others does appear, but it is still very much in the background; enjoyment of his own productive activity predominates in the infantile consciousness. Although highly developed art does so transcend the sphere of play, it too is rooted in playful experimentation and imitation, and we can detect their later growth of joy in being a cause in the work of fullfledged artists of our own day. Indeed, it is present in all creative activity, gilding earnest work with a sportive glitter. In artistic production, however, it has the special office of differentiating it from ordinary toil and making appreciation of the thing created go hand in hand with its production. Each new-found harmony of tone or colour or outline appealing to criticism of its creator causes him intense enjoyment all through the progress of its production, and the indifference sometimes felt toward the finished work results from frequent repetition which has dulled the edge of appetite.

5. *The Sociological Standpoint*

A still more summary method may be adopted in treating of the social significance of play, since the section already devoted to it is of a more theoretic character. The practice theory, as we have seen, makes youthful play intelligible, but finds no lack of application to adults as well. When we reflect on the unavoidable limitations and mechanical routine of a regular calling we see how valuable is the cheering and humanizing effect of play, both physical and mental, and especially of those games which are calculated to strengthen the social tie. The practice afforded by these is more important to the adult than to the child, since the latter has always a certain social sphere in his relations with his elders, while the wider demands of an adult are not always so well provided for.

Two distinct impulses underlie the foundation of society—namely, the desires for aggregation and for communication. Both are probably derived from the parental relation, which expands as the culture of the group develops. For this reason it is probable that Baldwin's principle of organic selection may take effect

in this special case. In general I hold to the view that play makes it possible to dispense to a certain degree with specialized hereditary mechanism by fixing and increasing acquired adaptations. On the social side we find much the same conditions, though we may perhaps assume that comradeship in play has an orthoplastic influence on the intensity of the social impulse. When a society (a primitive race, for example, which is forced by circumstances to wander about a great deal, or to conduct a war) undertakes new tasks which lead to stronger and more extended social organization, play alone can supply the necessary conditions. Under its "screening" influence natural selection has time to eliminate the variations which are not coincident, to further those which are, and so to strengthen gradually the social impulses.

These two original social impulses find satisfaction in the social circle as soon as the individual has outgrown the narrow limits of the family, and the first social group into which he voluntarily enters is that of his playmates. This is the social school for children; here, says Jean Paul, "the first social fetters are woven of flowers," and here, too, does the adult find the perennial spring for renewing the influence of the "socius"[684] in himself. Where association presents only its more pleasing features, the voluntary subordination which is sometimes irksome is natural enough both to the recognised leader and to abstract law. Kant's moral requisite that a person shall never be made use of as a means is applicable to public life only when individuals voluntarily fit themselves into the social mechanism. In clubs for amusement, social sympathy and good comradeship undergo a sort of artificial expansion which society could hardly attain without the games and festivities that characterize them. This fact is apparent among savages as well as in the most advanced social group of modern times. The union of early tribes for their dances and feasts made it possible for them to work together for serious purposes, and, to take an illustration from the other extreme, a group of university teachers, in spite of their peaceful calling, is best preserved from disastrous dissension when their good comradeship is promoted by frequent and regularly recurring social gatherings.

The effect of ordinary play is supported by social imitation. To do what the others do, and so get the advantage of the stimulus which belongs to collective activity; to thrill with the feeling that moves the masses; to get out of the narrow circle of one's own desires and efforts—these the child learns with his playmates, and the grown man in æsthetic sports and in festive gatherings. Thus play contributes to the "experimental verification of the benefits and pleasures of united action,"[685] and such experience must advance the ends of society, since it forms habits which extend beyond the sphere of play. Hence arises, too, the

imitation of individuals who are especially prominent in the social group. When among children or grown people some master spirit takes the lead by virtue of his courage, wisdom, presence of mind, or quick adaptability, his example is of quite incalculable influence on his fellows. The effects of æsthetic sympathy when the model is one of social excellence takes deep hold on the life around it. In modern poetry, too, we have a powerful means of bringing the social and ethical ideal home to each appreciative soul in the privacy of his own home.

We have found, too, that the various aspects of the impulse of communication which ground the inner spiritual association of the group are also available for play. While in the animal world self-exhibition may serve sexual purposes almost exclusively, such is not the case with man. As his personality develops in response to his everchanging relations to his social environment, he feels the need of finding all that moves him, his joys and sorrows, his strivings and attainments, reflected in the consciousness of other men. This is why I have insisted that the various forms of rivalry which are so essential to the preservation of the species are only in part derived from the fighting impulse. The higher motive of proving to one's associates what one is capable of, is also operative, and play which exhibits it not only serves to develop the social impulses, but also assists materially in the struggle for life. Besides giving expression to individual importance, the desire for self-exhibition includes a disposition to depreciate others, and the friction which ensues is a most effectual corrective of the vanity and overweening pride which are so easily associated with it, giving rise at last to a just estimate of the value and limits of our capacities.

The second and higher form of the communication impulse also—namely, the desire to influence other wills and to direct and control public action; in short, to become a social leader—finds full scope in play, which affords good preliminary practice of the art of ruling, just as it is the first school for voluntary subordination to social law. Here the masterful mind learns how to control milder spirits and to identify his own with the common interest, and here awakens the feeling of responsibility and the wish to become by his example an inspiration to his fellows. Any form of activity which develops sturdy independent leaders is to be encouraged, for it is these that society is most in need of.

Finally, we discover that imitation, where not mere collective play, is eminently promotive through tradition of various departments of culture. Few of our acquisitions in that line are due to physical heredity. Time may increase the

intensity of the social impulse, and possibly diminish the force of our pugnacious tendencies (although to my mind a comparison with the so-called lower-standing peoples offers little encouragement to the hope), and intelligence may be further refined if the limit has not already been reached; still this store of culture must be acquired by each individual anew. Play does much to make its attainment possible, and, above all, dramatic imitation play. I would refer the reader again to Signe Rink's description of the children brought up in Greenland. If parental interference could have been obliterated and imitation allowed free play, while the child, it is true, would not have become exactly like a Greenland woman, she would have come very near to it in her thoughts and feeling, and it is doubtful whether any subsequent training in European customs could have wholly extinguished this influence.

6. *The Pedagogical Standpoint*

The fact that the natural school of play affords a necessary complement to pedagogics was recognised by educators of old, with some notable exceptions, however. For example, the pietist Tollner uttered this sentiment at a conference: "Play of whatever sort should be forbidden in all evangelical schools, and its vanity and folly should be explained to the children with warnings of how it turns the mind away from God and eternal life, and works destruction to their immortal souls."[686] On the whole, however, the educational value of play has been recognised from the time of Plato to the present day.[687] It affords a reaction from the stress and strain of work. It satisfies the natural demand for pleasure so impressively set forth by Luther, giving opportunity for free, self-originated activity and practice to the physical and mental capacities.[688] A discerning educator could not afford to ignore so important a coadjutor.

There are two ways of regarding the relation of play to education. Instruction may take the form of playful activity, or, on the other hand, play may be converted into systematic teaching. Both methods are natural to us, and may be carried to extreme lengths. The history of pedagogics gives much interesting information as to experiments with the first; for example, Joachim Böldicke, inspired by reading Locke and Baratier,[689] set forth his method in the following programme in 1732, as "an attempt to educate by the help of games, music, poetry, and other entertainment through which important truths may be imparted." Thanks to the originators of the plan, ten intelligent children, twelve years of age when they began, could understand in their fifteenth year German, Latin, French, Italian, and English, and were well grounded in all useful general

knowledge. The writer proceeds to give an example of the riddle games as follows: “I know an animal which eats grass, has two horns on its head, a tail, and four cloven feet. What can it be? When in need of anything, it lows. It has calves, suckles them, and allows itself to be milked.” Whereupon the penetrating youth promptly responds in Latin: “Non est, quod nomen addas; de vacca emin cogitasti, quae est herbatica, cornuta, quadrupes, biscula, mugire, vitulos parere, lactari et emulgeri potest.”[690]

Against such trifling it is sufficient to repeat the warning that J. G. Schlosser published in 1776. At school one should learn to work, and he who does everything playfully will always remain a child. Other things being equal, it is most natural and advantageous to distinguish clearly between play and study work.[691] Among primitive races, where the life work is for the most part guided by natural impulse, at least in the case of males, boys may get sufficient preparation from play for their later life, though even they usually have some instruction at the outset. But with civilized peoples usage to earnest, persistent effort that is not dependent on caprice or impulse is an indispensable condition of success in the struggle for life, and for this reason school life should promote a high sense of duty as opposed to mere inclination.

Yet this distinction should not be so stringent as to exclude entirely the play impulse. We have repeatedly found in the course of this inquiry that even the most serious work may include a certain playfulness, especially when enjoyment of being a cause and of conquest are prominent.[692] Between flippant trifling and conscientious study there is a wide chasm which nothing can bridge; but not all play is such trifling. Who would forbid the teacher’s making the effort to induce in his pupils a psychological condition like that of the adult worker, who is not oppressed by the *shall* and *must* in the pursuit of his calling, because the very exertion of his physical and mental powers in work involving all his capabilities fills his soul with joy? Since play thus approaches work when pleasure in the activity as such, as well as its practical aim, becomes a motive power (as in the gymnastic games of adults), so may work become like play when its real aim is superseded by enjoyment of the activity itself. And it can hardly be doubted that this is the highest and noblest form of work.

Another question is how far the teacher’s effort should go in this direction, and to answer this definitely something more than a purely theoretic inquiry is needed, since many points are involved which have more to do with the art than the method of education. On the whole, we must concur with Kraepelin that in view of the danger of overstrain and overfatigue it is probably fortunate that the

majority of teachers do not possess the faculty of turning study into an amusement, and that those who do possess it make a great mistake in employing it constantly. Yet, while disapproving totally of all trifling in education, we still maintain that the school which is conducted exclusively by an appeal to the stringent sense of duty, with no incentive to the higher form of work in which the deepest earnestness has much of the freedom of play—that such a school does not perfectly fulfil its task.

In passing to our second question we must touch upon that connecting link between work and play which we call occupation. The hobbies of adults furnish voluntary activity like play, which is undertaken chiefly from the pleasure it affords, but often has aims outside the sphere of play. Pedagogical occupation is, on the contrary, playful practice in the line of the child's instruction, and forms an adaptive means of transition from the freedom of the first years of life to school work. Froebel's kindergarten system is most valuable in this way. Its occupations suggest to the children something beyond mere play, and supply definite aims for their activity and study, but they should always be kept near the limits of play; forced occupation against the child's will does not fulfil the purpose of such exercise. Since in what follows I shall be limited to the consideration of actual play, I take occasion to mention here that there is a certain analogy to pedagogic occupation among savages. Brough Smith sends from Australia an account of an old woman's direction of the occupation of young girls: "The old woman herself collected the material, built a skin hut, and taught each of the little ones with great care to make small ones like the large model. She showed them where to get the gum and how to use it. She sent the girls to gather rushes, and taught them to weave baskets over round stones, etc."[693] This is not exactly systematic education like that of our schools, but it may properly be classed with kindergarten work.

After this digression we now proceed to our second leading question: How far may a teacher direct play to pedagogic ends without destroying its freedom and genuineness? In this direction, too, many teachers err. Campe thought that the irrepressible tendency to popular sport should be allowed to indulge in only those of its inventions which developed the reason, perception, judgment, etc., and even those persons who recognise the value of Froebel's system bring the charge, which for a teacher is a damaging one, that by his methods, and especially by the songs he uses so much, spontaneity and *naïveté* are almost totally destroyed. Every user of the system should be cautioned against a careless or thoughtless application of it. Jean Paul says strikingly, "I tremble when any grown-up, hardened hand meddles with these tender buds from

childhood’s garden, rubbing off the bloom here and marring the delicacy of tint there.”

Yet it would be unfortunate and in a sense unnatural for the teacher, and even more so for the parent, to leave the playing child entirely to his own devices. Adults have three important tasks in this direction which are imperative—namely, general incitation to play, encouragement of what is good and useful, and discouragement of injurious and improper forms of play. Animals teach their young to play, and for this reason I have said it would be unnatural for parents to be unconcerned about their children’s games. While all animals show a greater or less disposition for sportiveness, it is strongest in the mother with her young, and gives rise to some of the most attractive phases of animal life. Love toward the small, helpless creatures manifests itself as well in playing with them as in nursing and caring for them. The mother not only submits to their tumbling all over her and pulling at her as their movement and fighting instincts impel them to do, but she encourages them to active play. This instinct is much stronger in our own race. Not the mother alone, but every normal woman feels again a child at the sight of children, and the father, too, is conscious of an irresistible drawing toward the nursery in his leisure moments, there to indulge in a short excursion to the lost paradise of childish play.

His parents are a child’s natural playmates for the first years of his life, since, as has been said, a too early introduction to a wider social circle can but have a baneful effect. Consequently, it is important that the inward impulse, as well as the outward stimulus, to play should be present, and when it is lacking the after impression of the early home throws a shadow over all the future life. The same remark, with some modifications, applies to teachers, when the child grows older and goes to school. It is, of course, not necessary for a teacher to join in the games of the merry urchins out of doors, yet in the lower grades especially it is a fortunate circumstance when he possesses the faculty of becoming a child again with the children in their plays and walks. He must be able, however, to resume the sceptre firmly when need arises.

This naturally opens the way for the second duty of the child’s instructor—directing his play toward what is good and useful. The two ends do not necessarily coincide, for there is an egotistical sort of playing with children which is more for the amusement of adults than anything else. Better no play than this. Herbert once said, “Let no man use his child as a plaything.” There are numerous ways to direct the child’s play to useful purposes. We may provide him with toys and tools which suggest their own use, as animals show us how to

do when they bring a living victim to their young as a plaything. The objection that in providing playthings the child's inventiveness as well as his enjoyment of illusion is interfered with needs but brief notice. Reischle rightly says that the most ancient tradition justifies the use of toys, and has chosen wisely among them. The physical and mental capacities of children are furthered, too, by the use of many plays which require no tools or toys. Recollection of our own childhood and a glance at the conditions will aid us in directing their play by advice or example. Influence in this direction is less apparent at school, but as the population of our cities grows more crowded the need for intelligent direction is becoming evident. City children grow up under unnatural conditions, and opportunities for play, especially health-producing movement-play, should be provided artificially, space devoted to it, needed aids furnished, and the effort made to introduce the most useful and attractive gymnastic plays to the children. The growing interest of all classes in such efforts encourages the hope that the damaging consequences of our modern methods of living may be effectually counteracted in this way.

As to the positive ethical development of the child by play, we may premise that play in itself contributes materially to the establishment of ethical individuality. This, as we have before insisted, is properly developed only in the give and take of social intercourse which with children is found almost entirely in play. "Development of ethical character," says Reischle, "requires on the one hand social influences preparatory for service in human society, and on the other individual culture. Any supposed antagonism between these is only apparent. In reality they are the two including poles. Human society reaches its fulness only among well-rounded individualities, since they alone are properly fitted for service to the whole; and be it noted that such characters do not develop in solitude, but in the stress of social life. Play has its uses in both directions. How else can individual qualities be so well brought out and developed as in the free, untrammelled use of all one's powers? Here are brought into contact contemplative, quiet natures with active, forceful ones, the stubborn with the pliant will. Play reveals the breadth or limitation of the child's horizon, the independence of his character, or his need of support and direction."[694]

In spite of all this, many are opposed to any attempt on the part of educators to introduce the ethical element into play. It is undoubtedly a mistake to smuggle moral reflections in whatever form into play (songs furnish a case in point), nor is it wise to single out for praise those who display skill, courage, self-control, a self-sacrificing spirit, or any other excellence of character in play. Such a practice tends to destroy its spontaneity and ideality. There seems, then, to be but

one legitimate means for promoting development of ethical character in play. Those who with me regard æsthetic enjoyment of poetry as a play will recognise in it a wide field for positive influence. From the first nursery rhymes to the reading provided for those nearly grown, a discriminating hand should choose those works which are calculated to supply ethical ideals to the plastic mind. Yet attractiveness should always be considered, and any obscuration of poetic charm with moral reflections be avoided.

Much more obvious is the educational value of the negative task, the third, which consists in the avoidance of what is evil, and the effort to check wrong tendencies. The struggle with open iniquity goes hand in hand with avoiding more insidious moral danger. Let us try to distinguish the more salient points by the following method: First, the child should not play too much. In the physiological investigation I spoke at some length of the law of repetition, and the trancelike or ecstatic state induced by many plays, together with the fact that they are often pursued to the point of exhaustion. If the instructor insists on rest before this comes to pass he would seem to be imposing a proper restriction, which is most valuable to ethical education, for at this point the moral law of temperance can be made most impressive to the child. Second, play which has become or threatens to become violent may be restrained to proper bounds, and the important ethical lesson of self-control be inculcated. Third, it may be required that everything dangerous to life or health shall be excluded or carefully regulated. Here the teacher must avoid overanxiety, for courage, which is itself of at least equal ethical value, can only be developed in the growing character by the encounter of actual risks and learning to meet them with self-reliance. Fourth, guardians must sometimes interfere when fighting impulses are manifested in a rude or ill-natured manner, as it is apt to be in the various forms of teasing. Misuse of this valuable impulse may cause deep spiritual injury to both the aggressor and his victim. When children have fallen under the power of a bad, tyrannous, or low-minded leader, they should be interfered with, and if possible by some method which will show up the unworthy leader in his true colours. Fifth, and finally, it should be emphasized that the beautiful task of play, the development of the individual to full manhood or womanhood by means of an all-round exercise of his or her capacities, is retarded by restriction to one particular form of play. The prevalence of daydreaming is an instance of such injurious one-sidedness.[695] When a child becomes absorbed in solitary musing (see the youthful reminiscences of George Sand), he should be aroused by application to useful occupation or by social stimuli which bring him in every possible way into contact with the external world. Even the noble gift of

imagination may from overindulgence degenerate into a deadly poison.

FOOTNOTES:

1 L. Grasberger, Erziehung und Unterricht im klassischen Alterthum, Würzburg, 1864, vol. i, p. 23. See also Colozza's compilation Il Guioco nella Psicologia e nella Pedagogia, Turin, 1895, p. 36.

2 Die Spiele der Thiere, Jena, 1896. English translation by E. L. Baldwin. D. Appleton and Company, New York, 1898.

3 This is a modification of my former view. For particulars, see the section on Imitative Play.

4 Jodl, Lehrbuch der Psychologie, Stuttgart, 1896, p. 425.

5 He speaks (Psychology des Sentiments, Paris, 1896, p. 195) of an instinctive impulse "à depenser un superflu d'activité." If, as I believe, this does not mean actual superfluity (Spencer's "surplus" energy), then it must refer to our natural impulse to seek action and experience. See also Paolo Lombroso, Piacere di esplicare la propria activita. (Saggi di Psicologia del Bambino, Turin, 1894, p. 117.)

6 Acquired impulses are all developed from natural ones.

7 In Ribot's classification these impulses become instincts belonging to the second group (Psychologie des Sentiments, p. 194).

8 The terms "private" and "public" (or "social") are used by Baldwin, Social and Ethical Interpretations, section 30, to cover a similar distinction. The terms "autonomic" and "socionomic" impulses would possibly answer.—Ed.

9 W. Preyer. Die Seele dee Kindes, 4to Auf., Leipsic, 1895, p. 64.

10 See the writings of J. Mark Baldwin on the importance of repetition for development. They are frequently cited in what follows.

11 B. Perez. Ses trois premières années de l'enfant, fifth edition, Paris, 1892, pp. 38, 45.

12 See G. Stanley Hall, Some Aspects of the Early Sense of Self. American Journal of Psychology, vol. ix, No. 3, 1898.

13 *Op. cit.*, p. 162.

14 L. Strümpell, Psychologische Pädagogik, Leipsic, 1880, pp. 359, 360.

15 *Op. cit.*, p. 357.

16 Dr. Sikorski, L'évolution physique de l'enfant, Revue Philosophique xix (1885). p. 418.

17

> "The wolves' eyes burned in their heeds like fire,
> But the boy in his folly fled not before the foe;
> He went up to one of them and seized it with his hand
> Where he saw the glittering eyes glowing in its head."

I. V. Zingerle, Das Deutsche Kinderspiel, second edition, Innsbruck, 1873. p. 51.

18 Les trois premières années, etc., p. 46. In regard to the words "sensations agreeable or even indifferent," I would say that this distinction between pleasure in sensation as such, and pleasure in agreeable sensation, recurs again and again. In the most advanced play, æsthetic enjoyment, it appears as the difference between æsthetic effect and beauty.

19 G. Compayré, L'évolution intellectuelle et morale de l'enfant, Paris, 1893.

20 H. Wölfflin, Prolegomena zu einer Psychologie der Architektur, Munich, 1886, p. 47.

21 W. Joest, Allerlei Spielzeug, Internationales Archiv für Ethnographie, vol. vi (1893).

22 Deutsche Colonialzeitung, 1889, No. 11.

23 Croker's Boswell's Johnson, p. 215.

24 *Op. cit.*, p. 65.

25 Perez, Les trois premières années, p. 16.

26 *Op. cit.*, p. 87.

27 Compayré, indeed, maintains that kissing in no more than a "ressouvenir" of the lip movements on the maternal breast.

28 L. Grasberger, *op. cit.*, Part I, p. 35. Fig. 282 in Maurice Emmanuel's book. La danse Grecque antique (Paris, 1896), furnishes a pictorial representation of this movement.

29 Miss Romanes's account of the capuchin ape perhaps furnishes an example from the animal world: "He pulls out hot cinders from the grate, and passes them over his head and chest, evidently enjoying the warmth, but never burning himself. He also puts hot ashes on his head" (Animal Intelligence, fifth edition, London, 1892, p. 493). The context favours the supposition of playful experimentation.

30 "Un aveugle, voulant exprimer la volupté que lui causait cette chaleur du soleil invisible pour lui, disait quil croyait entendre le soleil comme une harmonie" (M. Guyan, Les problèmes de l'esthétique contemporaine, third edition, p. 61).

31 A. Kussmaul, Untersuchungen über das Seelenleben des neugeborenen Menschen, 1859, p. 16.

32 Les yeux et les narines étant fermés, dit Longet, on ne distinguera pas une crème à la vanille d'une crème au café; elles ne produiront qu'une sensation commune de saveur douce et sucrée (Perez, Les trois années, etc., p. 14).

33 R. Semon, Im australischen Busch und an den Kusten des Korallenmeeres, Leipsic, 1896, p. 512.

34 *Op. cit.*, p. 18.

35 *Op. cit.*, p. 66.

36 Mario Pilo, La psychologie de beau et de l'art, Paris, 1895, p. 15.

37 This section has been published under the title Ueber Hör-Spiele, in the Vierteljahrsschrift f. wiss. Philos., xxii.

38 Descent of Man, vol. ii, p. 228.

39 E. and L. Selenka, Soninge Welt, Wiesbaden, 1896, p. 55. The cry is said to be less like a melody than a sort of exulting call. One of the Swiss hunters in the expedition said that the ape *jodeled* back to him.

40 W. Preyer, Die Seele des Kindes, p. 56. See Miss Shinn's Notes on the Development of the Child, p. 115.

41 J. Sully, Studies of Childhood, London, 1896, p. 409.

42 B. Perez, Ses trois premières années des enfant, p. 34.

43 E. Gurney, The Power of Sound, London, 1880, p. 102.

44 B. Sigismund, Kind und Welt, 1897, p. 60.

45 Miss Shinn's small niece displayed very little appreciation for rhythm. *Loc. cit.*, 120.

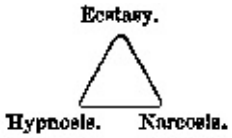
46 This instance is subsCituted for a parallel one of Professor Groos's, as the point of the latter would of course vanish in the attempt to translate it.—TR.

47 See Gurney, *op. cit.*, pp. 35, 306.

48 Darwin, *op. cit.*, vol. ii. p. 321.

49 Streifzüge eines Unzeilgemässen, vol. viii, p. 122.

50 P. Souriau, La Suggestion dans l'art, Paris, 1893. Of course this means only a more or less remote approach to narcosis on the one hand, and hypnosis on the other. Perhaps the idea of ecstasy meets our case even better, as Mantegazza has figured it:



51 Karl Büchner's pregnant hypothesis is that acquaintance with rhythm is chiefly derived from physical labour (Arbeit und Rhythmus, Leipsic, 1896).

52 See B. O. Stoll, Suggestion und Hypnose in der Völkerpsychologie, and J. Lippert, Kulturgeschichte der Menschheit, vol. i, p. 632, where this idea is set forth with great clearness.

53 Schopenhauer says, Rhythm (and rhyme) is "partly a means of keeping our attention—since we gladly follow it—and partly the occasion of a blind unreasoning submission in us to leadership, which by this means attains a certain authoritative and apparently unaccountable power over us."

54 *Op. cit.*, p. 67.

55 According to R. Wallaschek, it is the demand for distinct rhythm which first elevates the state of transport to the appreciation of melody, and leads to the proper valuation of the interval (Primitive Music, London, 1893, p. 232).

56 E. Hanslick, Vom Musikalisch-Schönen, Leipsic, 1896, p. 153.

57 *Op. cit.*, pp. 168, 171.

58 Stumpf has treated the question most exhaustively (Tonpsychologie, vol. i. p. 202).

59 H. Siebeck, Das Wesen der Aesthetischen Anschauung, Berlin, 1875, p. 153.

60 Köstlin, Aesthetik, p. 560.

61 "Primitive music can not have grown out of the voice modulation in excited speech, because in many cases it has no modulation of tone, but is simply rhythmic movement in a single tone" (Wallaschek, Primitive Music, p. 252).

62 *Op. cit.*, p. 272.

63 In a celebrated Chinese poem the effect of music is thus described: "Now soft as whispered words, now soft and loud together—like pearls falling on marble—now coaxing as the call of birds, now complaining like a brook, and now like a mountain

stream bursting its icy bounds." When we recall the great difference in form between Chinese music and our own, the similarity of emotional effect is astonishing.

64 Compayré, *op. cit.*, p. 41.

65 H. Gutzmann (Das Kindes Sprach und Sprachfehler, 1894, p. 7) shown that crying is good practice for talking, because, in contrast to the habitual method of breathing, a short, deep inhalation is followed by lingering exhalation, as in speech.

66 *Loc. cit.*, p. 368. It is, of course, difficult to say at what moment the automatic babbling attains the dignity of speech.

67 Somewhat akin to inspiratory sounds are the clicking noises which children often produce. These are well known to play a considerable part in the language of the Hottentots. For the influence of the self-originated language of children on the speech of adults, and for the analogy between child-language and that of the lower races, see H. Gutzmann, Die Sprachlaute des Kindes und der Naturvölker, Westermann's Monatshefte, December, 1895.

68 Lubbock and Tylor have pointed out that reduplication is used much more in the speech of savages than in that of civilized peoples.

69 *Op. cit.*, p. 311. These citations are somewhat curtailed.—Tr.

70 L. Beeq de Fouquières, Les jeus des anciens, Paris, 1869, p. 278.

71 Croker's Boswell's Johnson, p. 215.

72 See K. Bücher, Arbeit und Rhythmus, p. 75.

73 In subjective rhythm, a scale which is properly without accent is, as a rule, conceived of as having some tones emphasized to mark time. See E. Meumann, Untersuchungen zur Psychologie und Aesthetik des Rhythmus (Philos. Studien, vol. x, p. 286).

74 *Loc. cit.*, p. 301.

75 R. M. Meyer, Ueber den Refrain, Zeitschrift f. vgl. Litt-Gesch., i, 1887, p. 34. Marie G——, for example, sang in her seventh year, when first awakened, *wólla, wólla, budscha*, incessantly and melodiously.

76 *Loc. cit.*, p. 62.

77 "Le rythme ... vant surtout par son effet d'entrainement," Souriau, La suggestion dans l'art, p. 47.

78 W. Joest, Maylayische Lieder und Tänze aus Ambon und den Uliase (Molukken), Internat. Arch. f. Ethnogr., v, 1892, p. 23.

79 The application of the principle of thirds to rhyme is interesting, since the echo-like ring of the triple rhyme has an effect very similar to that of chain rhymes.

80 Miss Shinn, *loc. cit.*, p. 134. With the mentally deranged the stringing of senseless rhymes is very common. One patient wrote on a sheet of paper. "Nelke, welke, Helge; Hilde, Tilde, Milde; Hand, Wand, Sand." Kräpelin, Psychiatrie, Leipsic, 1896, p. 599.

81 Rochholz, Alemannisches Kinderlied und Kinderspiel, Leipsic, 1857, p. 124.

82 J. Mark Baldwin, Mental Development in the Child and the Race, 1895, p. 132.

83 Rather a free translation of the verse in J. D. Georgens's Mutter Büchlein. p. 170.

84 F. M. Böhme, Deutsches Kinderlied und Kinderspiel, 1897, p. 302.

85 A. Bastian, Die Völker des östlichen Asien, vol. iii, 1867, p. 227.

86 See H. Ploss, Das Kind in Brauch and Sitte der Völker, 1882, vol. ii, p. 285.

87 *Op. cit.*, p. 57.

88 L. Strümpell, Psychologische Pädagogik, p. 358.

89 Sully, *loc. cit.*, p. 415.

90 *Op. cit.*, p. 58.

91 *Op. cit.*, p. 33.

92 *Op. cit.*, p. 212.

93 "Cracking the fingers," writes Schellong from Kaiserwilhelmsland, "is a familiar practice with the little Papuan." Zeitschrift für Ethnologie, xxi (1889), p. 16.

94 G. A. Colozza does not sufficiently consider this versatility when he says in his interesting hook on play, "I giocattoli dei bambini poveri non sono che delle pietre; esse si divertono non poco nel sentire il rumore che si ha battendo pietra contra pietra." Il Gienoco nella Psychologia e nella Pedagogia, p. 70.

95 E. Grosse, Die Anfänge der Kunst, 1894, pp. 275, 277.

96 G. Reischel, Aus allen Welttheilen, 1896, No. 2. Wallaschek did not believe that the drum is a primitive instrument chiefly because of our failure to find them among prehistoric relics, though the fife is frequently found among those of the stone age. Here we have an instance, however, which, while it belongs to the close of the period, is of such a complicated and well-developed form as to point to long use. Moreover, as Grosse points out in a letter to me, Wallaschek's argument is not conclusive, inasmuch as the material used for primitive drums was perishable.

97 Our bells, too, may be derived from the rattle.

98 Les jeux des anciens, pp. 6, 12.

99 See Rich. Andree, Ethnog. Parallellen und Vergleichen, 1889, p. 86.

100 Alwin Schultz, Alltagsleben einer deutschen Frau zu Anfang des 18 Jahrhundert, 1890, p. 207.

101 A formidable objection seems to me to lie in the fact that manual labour is almost entirely wanting among the tribes who subsist by the chase, and that what little they have is conducted by the women, while it is the men who indulge in the song and dance. Grosse, moreover, assures me that even their swimming and marching are not calculated to support this theory. It should be added that Bücher has now considerably modified his view by deriving work itself from play (Die Entstehung der Volkswirtschaft, 1890, p. 92). "The order formerly laid down must be directly reversed; play is older than work, art older than production for utility."

102 This is too baldly stated.

103 *Op. cit.*, p. 91.

104 E. Raehlmann, Physiol.-psychol. Studien über die Entwickelung der Gesichtswahrnehmungen bei Kindern und bei operirten Blindgeborenen. Zeitsch. für Psychol. und Physiol. der Sinnesorgane, vol. ii (1891), p. 69. Raehlmann maintains in this article that those who are born blind and attain the power of vision by operation pass through a process of development quite like that of the child.

105 It is otherwise with those born blind. Johann Ruben, who was nineteen when operated on, at once made distance the subject of his investigation. "For example, he pulled off his boot and threw it some distance, and then tried to estimate how far off it

was. He walked some steps toward it, and tried to pick it up; finding that he could not reach it he went a little farther, until he finally got it." Raehlmann, ibid., p. 81.

106 Die Seele des Kindes, p. 4.

107

> "Then he forgot how cold he was, and played with the ring.
> The little child forgot all his woe.
> He seized upon the ring and said, 'What is this?'"
> —Zingerle, p. 51.

108 Kind und Welt, pp. 58, 61.

109 In Nacht und Eis, vol. i, p. 222.

110 J. G. Romanes, Animal Intelligence, p. 493. See, too, Ellendorf's beautiful description of the monkey playing with matches, Gartenlaube, 1862, p. 300.

111

> "There, see, the curtain dark already rolls away!
> The night must fly, now dreams the glorious day;
> The crimson lips that lay fast closed so long,
> Breathe now, half ope'd, a sweet, low song;
> Once more the eye gleams bright, and, like a god, the day
> Bounds forward to begin again his royal way."

112 W. James, Principles of Psychology, vol. i, p. 268.

113 Die Anfänge der Kunst, p. 99.

114 O. Külpe, Grundriss der Psychologie, 1893, p. 126.

115 "Shade," says Schelling, "is the painter's stock in trade, the body into which he must try to breathe the fleeting soul of light; and even the mechanics of his art show him that the black which is at his service comes far nearer to the effect of darkness than does white to that of light." Leonardo da Vinci has said, "Painter, if you desire the brilliance of fame, do not shrink from the gloom of shadow." Sammtl. Werke, vol. v, p. 533.

116 Die Seele des Kindes, p. 6.

117 Studies in Childhood, pp. 402, 300.

118 Ibid.

119 *Op. cit.*, p. 67.

120 See also Miss Shinn, *op. cit.*, pp. 29, 33, and F. Tracy, The Psychology of Childhood, Boston, 1897, p. 14.

121 Mental Development, p. 50.

122 See also Baldwin's reply to Preyer in the German and French translations of his book.—Ed.

123 *Op. cit.*, 13. Sully's boy, on the contrary, in the eighth month of his third year at once called a light greenish gray, green. Studies of Childhood, p. 437.

124 *Op. cit.*, p. 68.

125 Grosse, *op. cit.*, p. 53.

126 O. Frass, Beiträge zur Culturgeschichte den Menschen während der Eiszeit. Nach den Funden von der Schussenquelle. Archiv für Anthropologie, vol. ii.

127 Grosse, p. 100.

128 It should, however, be mentioned that the Brazilian Indians observed by v. d. Steinen wore green and blue feathers also.

129 It is undeniable that they sometimes use shades of blue in their ornaments, when they have seen Europeans do so.

130 *Op. cit.*, pp. 170, 171.

131 La suggestion dans l'art, p. 95.

132 *Op. cit.*, pp. 170, 171.

133 Die Seele des Kindes, p. 40.

134 That the child first acquires a clear perception of form by means of experimentation is proved by the uncertainty of those blind persons whose sight is restored, in recognising form by the eye (even weeks after the removal of the bandages), although they already have a clear idea of the forms, acquired by touch.

135 Prolegomena zu einer Psychologie der Architektur, p. 13.

136 A collection of such patterns may be found in the work of L. V. Frobenius, Die Kunst der Naturvölker. 1. Die Ornamentik, Westermanns Monatshefte, December, 1895.

137 W. Joest, Ethnolographisches und Verwandtes aus Guayana, p. 90.

138 Die Anfänge der Kunst, p. 111.

139 Vierteljahrsschr. für wissensch. Philos., vol. xx (1896).

140 *Op. cit.*, p. 14.

141 See G. H. Schneider. Why do we notice things which are moving regularly more easily than those at rest? Vierteljahrsschr. für wissenschaft. Philos., vol. ii (1878), p. 377.

142 L. Edinger, Die Entwickelung der Gehirnbahnen in der Thierreihe, Allgemeine medicinische Central-Zeitung, 65. Jahrgang (1896).

143 The most thrilling ghost stories are those in which a cold hand rests on the back of the neck, or where the victim sees in a mirror the ghost behind him. Dogs, too, who are quietly lying down react with greater excitement to light touches on the hair of their backs. The opposite to this feeling is the pleasure we feel in bestowing our backs in a safe corner—of a restaurant, etc.

144 L. William Stern, Die Wahrnehmung von Bewegungen vermittelst des Auges, Zeitschr. für Psychol. u. Physiol. d. Sinnesorgane, vol. vii (1894), p. 373.

145 *Op. cit.*, p. 64.

146 Die Seele des Kindes, p. 27. *Cf.* Baldwin's remarks on the child's interest in movement in Mental Development in the Child and the Race, p. 336.—TR.

147 See Ploss, Das Kind, etc., vol. ii, p. 313.

148 Grasberger, vol. i, p. 75.

149 The Play of Animals, p. 225.

150 Alwin Schultz, *op. cit.*, p. 169.

151

"Stay now thine heart, O wanderer, held fast in powerful hands!
Mine own breaks forth in trembling joy.
Thundering masses roll, on thundering masses hurled,
How can the eye and ear escape the tumultuous roar?

"War horses of the gods at play, leaping over one another.
Dashing downward and strewing to the winds their silver manes;
Exquisite forms unnumbered follow them, never the same,
Ever the same—who can wait till the end shall be?"

152 This is the case with our round dances, and is, perhaps, the greatest objection to them.

153 Die Anfänge der Kunst, pp. 202, 215.

154 Ibid.

155 Perhaps the world-wide demand for some sort of intoxicant is another kind of sensory play, since it is calculated to excite and intensify the social feelings. Kruepelin says (Psychiatrie, p. 361) that there is scarcely a single people which does not possess some popular agency for getting rid of the petty cares of life, and that the variety of these poisonous springs of pleasure is surprisingly great. I will note only alcoholism and the morphine habit. Mild intoxication by the former creates in the subject pleasant internal temperature sensations, combined with greater facility in all motor exertion. We become freer, gayer, and braver, and feel that life has no cares or anxieties for us, our strength and ability seem enhanced, and we behave and speak with candour and commonly without caution. The effect of morphine, on the contrary, seems to be rather a pleasant deadening of the motor impulses and a quickening of the intellect and imagination. In Paris there are said to be at least fifty thousand morphine takers, and the manufacture of gold hypodermic syringes of elegant design has become an important branch of the goldsmith's business. That this intoxication is indulged in like play is shown, by Kraepelin's statement that in a Russian regiment, to which a young friend of his belonged, nearly all the officers used the syringe. A still more evident play with the social feelings is displayed by many hysterical subjects, who take a certain satisfaction in imagined or real bodily sufferings. These become the central fact in their lives, and are even regarded with a sort of pride as an absorbing topic of conversation (Kraepelin, Psychiatrie, p. 782). These extravagances go to show that men in a normal state also play with their social emotions, even when these are in a way distasteful.

156 Die Seele des Kindes, pp. 211, 216.

157 Karl Vierordt, Physiologie des Kindesalters, Gerhardt's Handbuch der Kinderkrankheiten, vol. i, p. 181.

158 Preyer, Die Seele des Kindes, p. 139.

159 Preyer, Die Seele des Kindes. p. 189.

160 Mental Development, etc., chap, iv, the Origin of Right-handedness See, too, Vierordt, Physiologie des Kindesalters, p. 187. [Baldwin explains it genetically as an "expressive function" which afterward culminates in speech, which is located in an adjacent centre in the same hemisphere.—TR.]

161 See O. Behaghel, Etwas vom Zuknöpfen, Frankfurter Zeitung, 1897, No. 329.

162 *Op. cit.*, pp. 444, 600.

163 *Op. cit.*, pp. 444, 600.

164 Die Narcotic Genussmittel und der Mensch, preface, and p. 376.

165 Ibid.

166 Jules Legras, Au pays Russe, Paris, 1895, p. 18.

167 "The reprehensible confining of the child's legs," says Vierordt, in reference to kicking, "retards the development of the muscles not a little." Psychologie des Kindesalters, p. 186.

168 *Op. cit.*, p. 174.

169 Kind und Welt, p. 70. Sigismund tries to explain the backward creeping as due to the feet that the child gets on its dress and is impeded by it. But it is noteworthy that Baldwin's little daughter, who for a time preferred to creep backward, had previously exhibited the reverse of natural walking movements—namely, such as would carry her backward—when held over a table so that she could just feel it with her soles. Mental Development, etc., p. 82.

170 Les jeux des anciens, pp. 16, 21.

171 Sigismund, *op. cit.*, pp. 56, 74.

172 Die Seele des Kindes, p. 175.

173 Sigismund, *op. cit.*, pp. 56, 74.

174 Die Seele des Kindes, p. 179.

175 Mental Development, etc., p. 81.

176 Pädagogische Schriften, 1883, vol. ii, p. 333.

177 Kraepelin, Psychiatrie, p. 445.

178 *Op. cit.*, p. 182.

179 M. Guyau, Les Problèmes de l'Esthétique contemporaine, p. 48.

180 L. Grasberger, Erziebung und Unterricht im klassischen Alterthum, pp. 32, 319.

181 A. F. Chamberlain, The Child and Childhood in Folk-Thought, p. 268.

182 See W. Seoboda, Die Bewohner des Nikobar-Archipels. Inter. Arch. für Eth., vol. vi (1893), p. 32.

183 Grasberger, *op. cit.*, p. 300.

184 Weinhold. Altnordisches Leben, Berlin. 1856. p. 308.

185 H. O. Lenz, Gemeinnützige Naturgeschichte, 1851, vol. i, p. 612.

186 K. Wienhold, Altnordisches Leben, p. 307.

187 Die Seele des Kindes, p. 183.

188 J. Minor, Neuhochdeutsche Metrik, Strassburg, 1893, p. 11.

189

> "It is the godlike power of harmony
> Which orders wild motions to the quiet social dance.
> And like a Nemesis, with the golden reins of rhythm,
> Harnesses riotous lust, and tames its madness."

190 "O, Du frecher Spielmann, mach uns den Reihen lang! Juchheia! Wie er sprang! Herz, Milz, Lung und Leber sich rundum in ihm Schwang." K. Weinhold, Die deutschen Frauen in Mittelalter, p. 373.

191 Sonnige Welten, p. 77.

192 Our waltz was originally the final movement in a complicated dance "which represented the romance of love, the meeting, the pursuit, the painful doubts and difficulties, and at last the wedding jollity."—Schaller, Das Spiel und die Spieler, 1861, p. 219.

193 Grosse, *op. cit.*, p. 203.

194 Sonnige Welten, p. 838.

195 H. Ploss. Das Kleine Kind vom Tragbett bis zum ersten Schritt. 1881, p. 98. From this exhaustive treatise on the cradle it appears that most primitive peoples do not use our cradles with rockers, but prefer the swinging kind.

196 K. v. d. Steinen, Unter den Naturvölkern Centralbrasiliens.

197 R. Parkinson. Beiträge zur Ethnologie der Gilbert Insulaner. Internat. Archiv für Ethnologie, vol. ii, p. 92.

198 Becq de Fouquières, Les Jeux des Anciens, p. 54.

199 See especially *op. cit.*, 205, where Souriau seems to undervalue the attraction of the backward glide.

200 See Grasberger, *op. cit.*, p. 128.

201 *Op. cit.*, p. 99.

202 See Strutt, The Sports and Pastimes of the People of England, p. 153.

203 Weinhold, Altnordische Leben, p. 806.

204 Perez, Les trois premières années, etc., p. 80.

205 Sigismund, *op. cit.*, p. 40.

206 Ibid., p. 53.

207 I. H. Autenrieth, Ansichten über Natur und Seelenleben, p. 163.

208 Unter den Naturvölkern Centralbrasiliens, p. 383.

209 Grasberger, vol. i, p. 74.

210 Roehholz, p. 464.

211 Die Völker des östlichen Asien, vol. iii, p. 323.

212 Les trois premières années, p. 84.

213 Psychologie des Sentiments, p. 322.

214 Compayré, p. 271.

215 Die Seele des Kindes, p. 383.

216 W. James, The Principles of Psychology, vol. ii, p. 422.

217 See Compayré, p. 191.

218 See Baechtold, Gottfried Keller's Leben, vol. iii, p. 278.

219 Michael Munkacsy, Erinnerungen, Berlin, 1897, p. 4.

220 *Op. cit.*, vol. ii, p. 423.

221 *Op. cit.*, p. 9.

222 The Play of Animals, p. 98.

223 *Op. cit.*, p. 456.

224 *Op. cit.*, p. 103.

225 Alwin Schultz, *op. cit.*, p. 11.

226 O. Finsch, Reise nach Westsibirien im Jahre 1876, Berlin, 1879, p. 520.

227 F. Boas, Internat. Arch. für Ethnol., vol. i, 1888, p. 229. See, too, H. W. Klutschak, Als Eskimo unter Eskimo, pp. 136, 139, where are to be found illustrations of such figures.

228 E. v. Hartmann, Das Spiel. Tagesfragen, Leipsic, 1896, p. 146.

229 Die Seele des Kindes, pp. 183, 257.

230 *Op. cit.*, p. 80.

231 Kind und Welt, p. 115.

232 L'esthétique du Mouvement, p. 202.

233 Even in skittles one speaks of a good throw.

234 H. A. Berlepsch, Die Alpen in Natur und Lebensbildern, Jena, 1871, p. 415.

235 See Fouquières, p. 209.

236 Gutsmuths, Spiele zur Uebung und Erholung des Körpers und Geistes, eighth edition, pp. 122, 139, 169.

237 R. Parkinson, Beitr. zur Ethn. der Gilbertin, p. 92.

238 Gutsmuths, Spiele zur Uebung und Erholung des Körpers und Geistes, eighth edition, pp. 122, 139, 169.

239 H. O. Forbes, Travels of a Scientist in the Malay Archipelago, vol. i, p. 159.

240 William Black's Highland Cousins gives a fine description of this national game of Scotland.

241 See Fischart's descriptions in his Gargantua.

242 See Vieth's Encyklopädie der Leibesübungen, vol. iii, p. 296.

243 Another game like this is the so-called Prellballspiel. Gutsmuths, p. 101.

244 See Ploss, Das Kind, vol. ii, p. 292.

245 H. Wagner, Illustriertes Spielbuch für Knaben, Leipsic, 1895, p. 132.

246 Grasberger, p. 78.

247 See Fouquière, p. 173.

248 Zingerle, p. 27.

249 Jour. of Anthro. In., vol. xvii (1887), p. 88, on stone spinning tops.

250 Ten Kate, Beiträge zur Ethnographie der Timorgruppe. Internat. Arch. f. Ethn., vol. vii (1894), p. 247.

251 Ethnographische Parallelen und Vergleichen, p. 98. See, too, R. Andrée, Das Kreiselspiel und seine Verbreitung. Globus, vol. lxix (1896), p. 371.

252 Gutsmuths, pp. 232, 358.

253 Ibid.

254 H. Wagner, Spielbuch für Knaben, p. 114.

255 Rochholz, p. 391.

256 Grasberger, p. 60.

257 “Gargantua threw flat stones carelessly on the water so that they skipped I don’t know how many times.”

258 A beautiful example of this may be found in Schweinfurth’s Im Herzen von Afrika, Leipsic, vol. i, p. 329.

259 Grasberger gives this version in German verse:

> “Wahrlich ein arges Ziel für den Schwarm der spielenden Knaben,
> Und für des Steinwurfs Wucht pflanzten sie mich an den Weg.
> Wie hat die wüste Hagel getroffen, die blühenden Krone
> Mir zerschlagen, und ach, wie sind die Zweige geknickt!
> Nichts mehr gilt nach der Ernte der Baum Euch: zur eigenen Schändung
> Hab’ ich Unseliger hier alle die Früchte gezeugt.”

260 Bastian, Die Völker des östlichen Asien, vol. iii, pp. 322, 324.

261 Ibid.

262 Ploss, Das Kind, vol. ii, p. 291.

263 See A. Richter, Zur Geschichte des deutschen Kinderspieles. Westermanns Monatshefte, 1870.

264 Rochholz, p. 421.

265 Forbes, *op. cit.*, vol. i, p. 234. See also vol. ii, p. 45, where a simpler game is described which is played by boys also, and is more like European quoits.

266 Nordenskiöld, Die Umsegelung Asiens und Europas auf der Vega, Leipsic, 1881-’82, vol. i, p. 70.

267 Gutsmuths, p. 69.

268 Ibid., p. 198.

269 A peculiar and difficult game of catching is played by the Gilbert Islanders. A light feather ornament is loosely attached to a stick which is thrown into the air. As the stick descends the ornament floats away, and the players’ task is to fish for it, as it were, with a stone fastened to a long line and bring it down. This game is called “Tabama.” R. Parkinson, Beiträge zur Ethnologie der Gilbert Insulaner.

270 See Ernst Meier, Deutsche Kinderreime und Kinderspiele aus Swaben, p. 145.

271 R. Parkinson, *op. cit.*

272 H. Wagner, Illustrirtes Spielbuch für Knaben, p. 92.

273 *Op. cit.*, p. 177.

274 See Baldwin, Mental Development, etc., p. 315. Baldwin uses the term “coefficient of recognition.”

275 Ibid., p. 308, where the motor process is emphasized in connection with attention.

276 Die Seele des Kindes, p. 38.

277 F. Pollock, An Infant's Progress in Language. Mind, vol. iii, 1878.

278 Sully, Studies in Childhood, p. 421. See also Sikorski's report on his eight-months-old child, who recognised the crescent shape of the holes in a pigeon house as connected with the moon (p. 414).

279 The French animal psychologist, E. Alix, says the same thing of an Arabian dog which he owned (see The Play of Animals, p. 91). Play with shadows by adults might be dwelt upon. With us it is hardly more than trivial amusement for an idle company, but among other peoples it becomes much more important, as witness the highly interesting silhouettes hanging in the Berlin Museum. See, further, F. v. Sumasch, Das türkische Schattenspiel, Internat. Archiv für Ethnographie, vol. ii, p. 1.

280 Kind und Welt, p. 169. See Miss Shinn, *op. cit.*, p. 71.

281 K. v. d. Steinen, Steinzeit-Indianer in Paraguay. Globus, vol. lxvii, 1895, p. 249.

282 R. Andrée, Ethnographische Parallelen und Vergleiche, p. 57.

283 We may perhaps find the moving "Qualität der Bekanntheit" in the recurrence of the keynote of a melody.

284 Zola frequently applies the Wagnerian leading-motive method to the characterization of some figure in his novels, often with wearisome persistence, yet a not uninteresting study might be made of the subject.

285 See Fr. Kaufmann, Die Deutsche Metrik nach ihrer geschichtlichen Entwickelung, Marburg, 1897, p. 224. We may find a fine English example in a triolet of Walter Crane's:

"In the light, in the shade,
This is time and life's measure;
With a heart unafraid
In the light, in the shade,

Hope is born, and not made,
And the heart finds its treasure
In the light, in the shade;
This is time and life's measure."—Tr.

286 R. M. Meyer records the refrain as a survival from the first beginning of poetry. Ueber die Refrain, Zeitschr. f. vgl. Literaturgeschichte, vol. i (1887), p. 44.

287 See Minor, Neuhochdeutsche Metrik, pp. 393, 460.

288 See Minor, Neuhochdeutsche Metrik, pp. 393, 460.

289 Grasberger, p. 46. For other forms of this game see Gutsmuths, p. 377.

290 "The third year," says Sully, "is epoch-making in the history of memory. It is now that impressions begin to work themselves into the young consciousness so deeply and firmly that they become a part of the permanent stock in trade of the mind."—Studies of Childhood, p. 437.

291 Sonntagsbeilage zur Vossischen Zeitung, January 10, 1897.

292 Die Erziehung der Töchter, wie solche Herr von Fénelon, Erzbischoff von Cambray beschrieben, aus dem Französischen übersetzt. Lübeck, 1740, p. 36.

293 Für wirklich halten: It is recommended by the authorities of Baldwin's Dictionary

of Philosophy that the term “semblance” be used as the equivalent of the German “Schein?” or illusion—that which is “taken for real”—in this field of the æsthetic and play functions.—Ed.

294 See A. Oelzelt-Nevin, Ueber Phantasie-Vorstellungen. Graz, 1889, p. 42.

295 It may often be observed that the child’s eyes lose their convergence as their interest is absorbed—a means of detachment from surrounding reality. Even in half-grown children the power of detachment is much greater than in adults. The great modern poets are at a disadvantage in that their appeal is to an audience whose power of imagination is on the wane. It was otherwise with less cultured people when, first, the adults were less literal and, second, the poets themselves less intellectualized.

296 See Baldwin’s Handbook of Psychology, vol. i, p. 227.

297 That some temperaments play with dreams of an unhappy future there is no doubt. We shall encounter such phenomena later in noticing enjoyment of pain.

298 Games of chance which keep the participants long in suspense are among the special forms of adult play which make use of such picturing of the future.

299 Even the serious Lucca Signorelli was not ashamed to place two clouds, which, showing distinct faces, back of the Christ in his Crucifixion.

300 See in this connection the more thorough treatment in the section on inner imitation.

301 Strümpell, Psychologische Pädagogik, p. 364.

The child, of course, spoke a baby German. This effort at translation serves only to show the versatility of her imagination and its disjointed expression.—Tr.

For example of amentia, see Kraepelin, Psychiatrie, p. 331.

302 While Strümpell’s example was suggestive of the wanderings of a diseased mind, this one recalls the tales told by savages. Compare it, for example, with the Bushman’s story of the grasshopper in Ratzel’s Völkerkunde (vol. i, p. 75). Of course, we do not know whether there may not be some closer connection of ideas than we can trace.

303 See Paola Lombroso, Saggi di Psicologia del Bambino, chap. ix, especially p. 155; B. Perez, L’art et la poésie chez l’enfant, chap. ix.

304 John Forster, The Life of Charles Dickens, vol. ii, p. 71.

305 They diverge from play, first, in that an end outside of the sphere of play is added to that of satisfaction in production for its own sake; and, second, that much of the artist’s effort is spent in improving, altering, and being otherwise occupied with technical conditions, etc., and not engaged in for the pleasure which it affords. We may compare what was said above in regard to sport.

306 Grosse, *op. cit.*, p. 250.

307 When Daudet was thirteen years old he took an independent voyage on a ship with some soldiers on their way home from the Crimea. “With my southern power of imagination,” he writes in Gaulois, “I made myself out an important personage.”

308 *Op. cit.*, p. 309. See Guyan, Éducation et Hérédité, p. 148.

309 Perez, Les trois premières années, etc., p. 121.

310 Like ancient and modern wonder tales, whose occurrences always take place in distant and almost inaccessible lands.

311 The close of this recalls the numerous efforts of primitive folk to account for natural phenomena.

312 *Op. cit.*, p. 148.

313 See, too, Sully's Studies of Childhood, p. 254.

314 B. Perez, L'enfant de trois à sept ans, Paris, 1894, p. 239.

315 The Play of Animals, p. 214. Zum Problem der unbewussten Zeitschätzung, Zeitschr. f. Psycholog. u. Physiol. d. Sinnesorgane, vol. ix.

316 *Op. cit.*, pp. 418, 545.

317 Die Seele des Kindes, p. 212.

318 A Biographical Sketch of an Infant, Mind, vii (1877), p. 289.

319 See Stern's remark quoted above on watching movement.

320 *Op. cit.*, p. 418.

321 La psychologie des sentiments, p. 322.

322 Die Reize des Spiels, Berlin, 1883, p. 61.

323 James says that the stimuli of scientific curiosity "are not objects, but ways of conceiving objects." Principles of Psychology, vol. ii, p. 430.

324 Fr. Nansen, In Nacht und Eis, Leipsic, 1897, vol. i, p. 151.

325 H. Spencer, The Principles of Sociology, vol. i, p. 86.

326 Unter den Naturvölkern Centralbrasiliens, pp. 59, 67, 79.

327 Ibid.

328 Ibid.

329 Im Australischen Busch, etc., p. 526.

330 Dietrich Tiedemann, Beobachtungen über die Entwickelung der Seelenfähigkeiten bei Kindern, Altenburg, 1897, p. 14.

331 Die Seele des Kindes, p. 140.

332 Les trois premières années, etc., p. 117.

333 Die Seele des Kindes, p. 383.

334 M. W. Shinn, Notes on the Development of a Child, p. 11.

335 Compayré, *op. cit.*, p. 308.

336 Ernest H. Lindley, A Study of Puzzles. Amer. Jour. of Psychol., viii (1897), p. 436.

337 The amusing rhymes illustrating cause and effect which children are so fond of, are in point—for instance, The House that Jack Built—and this one in German:

"Der Teufel holt den Henker nun,
Der Henker hängt den Schlächter nun,
Der Schlächter schlägt den Ochsen nun,
Der Ochse läuft das Wasser nun,
Das Wasser löscht das Feuer nun,
Das Feuer brennt den Prügel nun,
Der Prügel schlägt den Pudel nun,
Der Pudel beisst den Jockel nun,
Der Jockel schneidet den Hafer nun,
Und kommt auch gleich nach Haus."

See the similar Hebrew verse about the kid in Tylor's Anfänge der Culture, vol. i, p. 86.

338 *Op. cit.*, p. 353.

339 Ernest Lindley, *loc. cit.*, p. 455.

340 A. Seidel, Geschichten und Lieder der Africaner, Berlin, 1896, pp. 176, 309. Similar riddles used for the amusement of children are given by Tylor. *Op. cit.*, vol. i, p. 91. Words used in a double or multiple sense (homonyms) are particularly effective.

341 Annoyance over one's own enjoyment is, of course, not play.

342 The Psychology of Tickling, Laughing, and the Comic. Amer. Jour. of Psychol., vol ix.

343 See Ribot, Psychologie des sentiments, p. 64.

344 Principles of Psychology, vol. ii, p. 590.

345 Kuno Fischer, Arthur Schopenhauer, Heidelberg, 1893, p. 125.

346 Ribot, La Psychologie des sentiments, p. 64.

347 See Hubert Rotteken's interesting article, Ueber ästhetische Kritik bei Dichtungen (Beilage zur Allgem. Zeit., 1897, Nos. 114, 115). Volkelt (Aesthetic des Tragischen, p. 389) seems to me to undervalue this point.

348 Max Reischle, Das Spielen der Kinder in seinem Erziehungswerth, Göttingen, 1897, p. 17.

349 Lipps gives special attention in his Psychologie der Komik to this point (Philosph. Monatshefte, 24 and 25).

350 I shall not here discuss the relative importance of the two.

351 Even the first shock is not entirely unpleasant, since we usually have a premonition of the approaching counter shock.

352 La Suggestion dans l'art, p. 39.

353 See Sully, Studies in Childhood, p. 501.

354 "The first stage, depression, is in itself considered entirely extra-æsthetic. For as soon as inner imitation comes into play—that is, as soon as the æsthetic aspect is assumed—the projection of the I into the object begins and depression gives place to exaltation." *Op. cit.*, p. 336.

355 Herman Wagner, Spielbuch für Knaben, p. 572.

356 H. Wagner, Spielbuch für Knaben, p. 542.

357 I. von Kreis, Ueber die Natur gewisser Gehirnzustande. Zeitschrift f. Psych. u.

Phys. d. Sinnesorgane, viii (1894), p. 9.

358 See p. 4, note 3.

359 Die Reize des Spiels, p. 131.

360 I remember a serious fight between two boys of about fifteen, in which the stronger was content to throw the other over and over again and quietly let him regain his feet.

361 In the fight between Odysseus and Ajax the position of the contestants was compared to the sidewise posture of two sparring dogs.

362 Von den Steinen, Unter den Naturvolken Central-Brasiliens, pp. 127, 383.

363 Among the Greeks throwing three times was the rule.

364 H. A. Berlepsch, Die Alpen, p. 417.

365 Some of the succeeding examples are taken from M. Zettler's article on prize lighting in Euler's encykl. Handbd. ges. Turnwesens.

366 In Switzerland this play is called Katzenstriegel. Grown boys try to pull each other over thresholds in this way.

367 When Milon, of Croton, held an apple in his fingers, it was said to be impossible to get the fruit away from him, or to bend even his little finger.

368 Fr. Fedde's article Griechenland, in C. Euler's encykl. Handb. d. ges. Turnwesens.

369 W. Richter, Die Spiele der Griechen und Römer, p. 38.

370 H. Raydt, Ein gesunder Geist in einem gesunder Körper, Hanover, 1899, p. 102.

371 G. J. Romanes, Animal Intelligence, p. 485.

372 Altnordisches Leben, p. 294.

373 See E. v. Hartmann, Tagesfragen, Leipsic, 1896, p. 135.

374 A very interesting example from ethnology is contained in the article by W. Svoboda, Die Bewohner des Nikobaren-Archipels. Intern. Arch. f. Ethnogr., vi, 1893, p. 6.

375 We shall return to this subject in the consideration of love plays.

376 Strutt, *op. cit.*, p. 8.

377 Alwin Schultz, Das höfische Leben zur Zeit der Minnesinger, Leipsic, 1889, vol. ii, p. 118.

378 K. Weinhold, Altnordisches Leben, p. 297.

379 K. Weinhold, Geschichte der menschlichen Ehe, Jena, 1893, p. 158.

380 Studies in Childhood, pp. 268, 269, 271, 274.

381 Ibid.

382 Ibid.

383 Paolo Lombroso, *op. cit.*, p. 126.

384 Carl Vogt, Aus meinem Leben, Stuttgart, 1896, pp. 70, 98.

385 See R. M. Werner, Lyrik und Lyriker, Hamburg, 1890, p. 220. Rückert and Uhland engaged in another beautiful contest in which they carried on a narrative alternately and in such a manner that each stanza was intended to make the next one difficult.

386 See Lazarus, Die Reize des Spiels, pp. 88, 89.

387 Ibid.

388 K. Plischke, Kurze Mittheilung über zwei malaysische Spiele. Intern. Arch. f. Ethnogr., iii (1890).

389 H. M. Schuster, Das Spiel, p. 2.

390 K. Weinhold, Die deutschen Frauen im Mittelalter, vol. i, p. 115.

391 J. Büttikofer, Einiges über die Eingeboren von Liberia. Intern. Arch. f. Ethnogr., i (1888).

392 According to Andrée it is played in Arabia and a large part of Africa. The Berlin Museum has such boards from various African districts, notably one from central Africa, with two rows of six holes and a carved head on the end.

393 See R. Andrée, Ethnog. Parall. u. Verg. Neue Folge, p. 102. Petermann's description, which I have not fully transcribed, seems to me to be deficient in that it does not make clear how the reckoning is kept.

394 H. Petermann, Reisen im Orient, Leipsic, 1860, vol. i, p. 162.

395 See A. v. d. Linde, Geschichte und Litteratur des Schachspiels, Berlin, 1874, vol. i, note 2.

396 See T. v. d. Sasa, Zur Geschichte und Litteratur des Schachspiels, Leipsic, 1897, p. 19.

397 J. Schaller, Das Spiel und die Spiele, p. 247.

398 E. B. Tylor, On the Game of Patolli in Ancient Mexico and its probably Asiatic Origin. Jour. of the Anthrop. Instit. vol. viii (1878). On American Lot Games as evidence of Asiatic intercourse previous to the time of Columbus. Internat. Archiv. f. Ethnogr., supplement to vol. ix (1896), p. 55.

399 See, too, in this connection J. Schaller, Das Spiel und die Spiele, p. 239.

400 Lazarus, *op. cit.*, p. 98. I differ totally from Lazarus's unwarranted conclusion that in some card games, where the cards are distributed accidentally, the chief stimulus is

in the “battle of reason against chance.”

401 See v. d. Steinen, Unter den Naturvölkern Zentral Brasiliens, p. 230.

402 *Op. cit.*, pp. 90, 102–109. Lazarus treats exhaustively of this symbolic significance of play and likens it to the symbolism of music, which may be effective without clear consciousness of it on the part of the subject.

403 Ibid., p. 91.

404 Second edition, Paris, 1895.

405 Playful rivalry is quite rare among animals, and for that reason it was not considered in my former work. It is only during courtship that animals engage in such contests, which are accordingly included under courtship plays.

406 R. Andree, Ethnogr. Parall. u. Vergl., pp. 95, 96.

407 Ibid.

408 The Eclipses Politico-Morales draws the picture of a fashionable lady of the early eighteenth century. She says: “We have our sprees in spite of the men; we dance and carouse the whole night long.... We smoke and chew tobacco and make wagers about them.” A. Schultz, Alltagsleben einer deutschen Frau, etc., p. 186.

409 K. Weinhold, Altnordisches Leben, p. 315.

410 Colozza, *op. cit.*, p. 85.

411 Grosse, Die Anfänge der Kunst, p. 231.

412 Weinhold, Altnordisches Leben, pp. 462, 463.

413 Many of the new games for children which appear every year are simply modifications of backgammon.

414 When it is known in advance that the chances are unequal it is common to make the stakes so as well, sometimes ten to one, or a cow to a hen, etc.

415 J. Schaller, p. 269.

416 Schuster, *op. cit.*, p. 9.

417 A. Seidel, Geschichten und Lieder der Africaner, p. 162. See Globus, vol. lxvii (1895), p. 387.

418 The two Englishmen who placed two snails on a table and bet high stakes on which would reach the other side of it first furnish a fine instance of this kind. M. Schuster, Das Spiel, p. 216. The English have always been and especially at the beginning of this century famous for their bets.

419 Tagesfragen, p. 162.

420 Guhl und Koner, Das Leben der Griechen und Römer, Berlin, 1864, p. 354.

421 R. Parkinson, Beiträge zur Ethnologie der Gilbert-Insulaner.

422 A particularly pretty oracle, affording no less than four alternatives, is described by Hall Caine (The Manxman, London, 1894, p. 120) as in use on the Isle of Man. A maiden, anxious to know her fate, throws a willow bough in the water, while she sings:

"Willow bough, willow bough, which of the four,
Sink, circle, or swim, or come floating ashore?
Which is the fortune you keep for my life,
Old maid or young mistress, or widow or wife?"

423 Die Anfänge der Kultur, vol. i, p. 80.

424 Tylor, *op. cit.*, pp. 78, 125.

425 A. Wünsche, Spiele bei den Arabern in vor- und nachmohamedanischer Zeit. Westermanns Monatshefte, März, 1896.

426 Die Völker des östlichen Asien, vol. iii, p. 326.

427 Bastian, *op. cit.*, vol. ii, p. 358; vol. iii, p. 323.

428 Ibid.

429 W. Richter, Die Spiele der Griechen und Römer, p. 76.

430 H. Peterman, Reisen im Orient, vol. i, p. 157.

431 Hans Egede, Beschreibung von Grönland, Berlin, 1763, p. 178. See R. Andree, Ethnogr. Par. Neue Folge, p. 104.

432 The New Zealand game "ti" consists in counting on the fingers. One of the players calls a number and must instantly touch the right finger; while in the Samoan game "Lupe" (see Andree, *op. cit.*, p. 99) one player holds up a certain number of fingers, whereupon his opponent must do the same or be loser.

433 Tylor, Anf. d. Kult., vol. i, pp. 74, 75.

434 Andree, *op. cit.*, p. 98.

435 Bastian, Die Völker d. östl. Asien, vol. ii, p. 394.

436 See Becq de Fouquières, p. 294.

437 Ribot, Psychologie des sentiments, p. 322.

438 Ribot, Psychologie des sentiments, p. 322.

439 *Op. cit.*, p. 60.

440 See Schaller, pp. 258, 268.

441 See Schaller, pp. 258, 268.

442 J. E. Erdmann, Ernste Spiele, p. 161.

443 *Op. cit.*, p. 76.

444 Schuster, p. 83.

445 See anecdote of Goethe's youth, p. 105. For the destructive impulse in animals, see The Play of Animals, pp. 91, 200, 220.

446 Saggi di psicologia del bambino, p. 118.

447 L'éducation progressive, Paris, 1841, vol. i, p. 302.

448 H. Emminghaus finds many points of resemblance between the period of life during which such actions are most rife and a condition of mania. (Die psychischen Störungen des Kindersalters, Tübingen, 1899, p. 179.)

449 Fr. Scholz, Die charakterfehler des Kindes, Leipsic, 1891, pp. 148, 149. See F. L. Burk, Teasing and Bullying. The Pedagogical Seminary, vol. iv (1897), p. 341.

450 See S. Sighele, Psychologie des Auflaufs u. der Massenverbrechen, Dresden, 1897, p. 13.

451 A portion of this section appeared in the periodical Die Kinderfehler. It may be compared with Burk's article on teasing and bullying, which was then unknown to me. The latter, however, is more concerned with serious than with playful aspects of the subject.

452 The Play of Animals, p. 167.

453 See Schneegan's Geschichte der Grotesken Satire, p. 443.

454 Leopold Wagner, Manners, Customs, and Observances, London, 1895, p. 34.

455 Becq de Fouquières, p. 273.

456 W. Joest, Ethnographisches und Verwandtes aus Guayana, supplement to vol. v, Intern. Arch. für Ethnographie (1892), p. 49.

457 Gutsmuth, *op. cit.*, p. 25.

458 Becq de Fouquières, p. 2B1.

459 Sixth edition, Leipsic, 1896, pp. 321–323. This recalls tales of Roman emperors who sat before their guests dishes containing the heads of their own wives and children. See Hall and Allin, *loc. cit.*, p. 22.

460 F. Pollock, An Infant's Progress in Language, Mind, vol. iii (1878).

461 Sigismund, p. 151. See Burk, *op. cit.*, p. 356.

462 L. Wagner, Manners, Customs, and Observances, p. 255.

463 See on this subject Perez, Les trois premières années, p. 320.

464 Hall and Allin's Psychology of Tickling, Laughing, and the Comic, p. 21.

465 O. Beauregard, La caricature il y a quatre mille ans. Bulletin de La Soc. de l'Anthropol. de Paris, 1889.

466 Marcano, Caricature précolombienne des Cerritos. Bulletin Soc. de l'Anthropol. de Paris, 1889.

467 Deutsches Kinderlied und Kinderspiel, liv.

468 Grosse, p. 235.

469 F. M. Bohme, pp. 271, 277.

470 See E. H. Meyer, Deutsche Volkskunde, Strassburg, 1898, p. 337: "This practice is very ancient, and seems to have given their names to some German tribes."

471 Ibid.

472 To cover all the ground, the teasing application of wit would have to be included here. It is taken up and treated briefly in the next section.

473 Carl Sittl, Die Gebärden der Griechen und Römer, Leipsic, 1890, p. 90.

474 Ibid.

475 Early History of Mankind, second edition, 1870, p. 45. See the analogous behaviour of the Dakotas in Darwin's The Expression of the Emotions, p. 257.

476 See Sittl, p. 99.

477 Die Völker des östlichen Asien, vol. iii, p. 222.

478 Ernste Spiele, p. 10.

479 The Human Mind, vol. ii, p. 148. Psychologie des sentiments, p. 342.

480 See Hall and Allin, *op. cit.* The remark of a little girl who danced about the grave of her friend and rejoiced thus, “How glad I am that she is dead and that I’m alive!” is in the same line.

481 In my Einleitung in die Esthetic I have tried to show how the feeling of superiority is gradually supplanted by inner imitation. In the humorous contemplation of inferiority Erdmann’s “maliciousness” need have no place, and we can conceive of a God as laughing in this way. As Keller’s poem has it, “Der Herr, der durch die Wandlung geht, Er lächelt auf dem Wege.”

482 The fact that the humorous temperament is so much more rare in women artists than in men supports the theory of its involving the fighting impulse. (See Mario Pilo, La psychologie du beau et de l’art, Paris, 1895, p. 145.)

483 G. H. Schneider, Der Menschliche Wille, Berlin, 1882, p. 62.

484 Semon, Im Australischen Busch, pp. 168, 197.

485 Strutt, *op. cit.*, p. 62.

486 The Principles of Psychology, vol. ii, p. 427.

487 Grasberger, pp. 52, 57.

488 Grasberger, pp. 52, 57.

489 Das Kind, second edition, Leipsic, 1896, p. 53.

490 Bastian, Die Völker des östlichen Asien, vol. iii, p. 325.

491 Alwin Schultz, Alltagsleben einer deutschen Frau, etc., p. 8.

492 Die Völker des östlichen Asien, vol. iii, p. 325.

493 They do not, of course, form the essence of poetic enjoyment.

494 Der dramatische Konflikt, Grenzboten, 1897, No. 39.

495 Volkett, Aesthetik des Tragischen, München, 1897, pp. 83, 87.

496 W. Wetz, Ueber das Verhältniss der Dichtung zur Wirklichkeit und Geschichte. Zeitschr. f. vgl. Litt.-Gesch., vol. ix, p. 161. He admits in the sequel that in Corneille’s Cid, for instance, there is no such working out of psychical individuality.

497 Ibid.

498 Volkett, Aesthetik des Tragischen, München, 1897, pp. 83, 87.

499 Psychologie des sentiments, p. 225.

500 Nietzsche, Götzendämmerung, p. 136.

501 I shall return later to the discussion of Wundt’s use of imitation.

502 Vorles. üb. d. Menschen-u. Thierseele, third edition, 1897, p. 405.

503 The Psychology of Love, p. 53.

504 L’enfant de trois à sept ans, p. 273.

505 Zeitschr. f. Psychol. u Physiol. d. Sinnesorgane, vol. ii (1891), p. 128.

506 Fritsch, Die Eingeborenen Süd-Afrikas, p. 140.

507 Colin A. Scott, Sex and Art, Am. Jour. of Psychol., vol. vii, p. 182.

508 Westermarck, *op. cit.*, p. 156.

509 Westermarck, *op. cit.*, p. 192.

510 Rudeck, Geschichte der öffentlichen Sittlichkeit in Deutschland, Jena, 1897, p. 45.

511 Altum, one of the highest authorities on birds, confirms this view (Der Vogel und sein Leben, fifth edition, Münster, 1875, p. 137). I have to thank Baldwin, too, for the reference to Guyau, who considers that the innate modesty may be “nécessaire à la femme pour arriver, sans se donner, jusqu’au complet développement de son organisme.” [See also Havelock Ellis, Geschlechtstrieb und Schamgefühl, p. 10. This view was worked out in some detail, it seems, together with a view of sexual selection similar to Professor Groos’s, by Hirn, in a chapter on Animal Display in a Swedish work in 1896: it is now reproduced in that author’s Origins of Art (1900), chap. xiv; *cf.* also the preface to the same work.—J. M. B.]

512 *Op. cit.*, p. 87.

513 Mind, October, 1880.

514 Colin A. Scott, *op. cit.*, p. 181.

515 We may compare, too, our watch charms. They, like the trophies and tribal symbols of savages, show much more the desire for ownership than the principle of self-exhibition.

516 The examples of decoration by animals apply to their dwellings rather than to their persons.

517 Grosse, p. 233.

518 In an article on Sex and Art, Scott has developed similar ideas, and has rightly connected the vagaries of fetichism with the abnormal sexual excitement produced by special materials, such as fur, velvet, etc.

519 The Play of Animals, p. 211.

520 Page 76.

521 A. Stöckl, Lehrbuch der Aesthetik, second edition, Mainz, 1889, p. 229.

522 Wagner and Liszt are especially strong in such effects.

523 Vischer, Aesthetic, sec. 189. Hall and Allin, *op. cit.*, p. 31.

524 R. J. Dodge, Modern Indians of the Far West, pp. 146, 164.

525 *Op. cit.*, p. 68.

526 *Op. cit.*, p. 14. Hall and Allin.

527 According to R. J. Dodge, who is a thorough student of Indian life, among those of the far West it is a polite fiction not to observe the wooing lover, “because they consider love a weakness.”

528 G. Tarde, Les lois de l’imitation. Second edition, Paris, 1895.

529 J. M. Baldwin, Mental Development, and Social and Ethical Interpretations.

530 Habit and Instinct. London and New York, 1896, p. 168.

531 Baldwin’s further distinction between tradition and social heredity seems true enough, but not especially practical.

532 Gedanken über Musik bei Thieren und beim Menschen. Deutsche Rundschau, October, 1889.

533 See Baldwin’s A New Factor in Evolution, in The American Naturalist, June,

July, 1896.

534 The Senses and the Intellect, p. 408.

535 James Mill, Analysis of the Phenomena of the Human Mind, vol. ii, chap. xxiv. Tiedemann's remarks on the subject, too, are clear and brief. *Op. cit.*, p. 12.

536 See A. Pfänder, Das Bewusstsein des Wollens. Zeitschr. f. Psych. u. Phys. d. Sin., vols. x and xvii.

537 The strong emphasis of imitation in hypnosis seems to support this, for there we have a decided narrowing of the consciousness, so that the antagonistic motive has little showing compared with the idea of movement.

538 An attempt to explain the charm of what is forbidden, not by means of the fighting impulse but on the ground of psychic inhibition may be found in Lipps's Grundthatsachen des Seelenleben, pp. 634, 641.

539 In this triumph we find a means of explanation for the exhilarating effect of simple—that is neither mischievous nor mocking—imitation.

540 The biological criterion of practice of the impulse is not very well applicable to imitation. We do not copy playfully in order to be able to copy seriously, and, moreover, playful imitation itself accomplishes the purpose. Yet the practice theory is of course indebted to the contributions of imitation in the highest degree.

541 The question as to whether play may not be more extensive from a purely biological standpoint is touched upon in the theoretical division.

542 "I looked for great men," said Nietzsche once, "and found them only aping their ideals." Vol. viii, p. 66.

543 Social and Ethical Interpretations, p. 103.

544 Fr. Tracy, The Psychology of Childhood, fourth edition, Boston, 1897, p. 104.

545 Mental Development, etc., p. 123. Egger, Le développement de l'intelligence et du langage chez les enfants, p. 10.

546 *Op. cit.*, p. 354. See Perez (Les trois premières années, etc., p. 124), who assumes involuntary imitation in the second month.

547 Die Seele des Kindes, p. 186.

548 Preyer, *op. cit.*, p. 188.

549 Kind und Welt, p. 129.

550 Lloyd Morgan calls one imitation and the other copying (Habit and Instinct, p. 171).

551 *Op. cit.*, p. 188.

552 *Op. cit.*, p. 88.

553 Mental Development, p. 123.

554 *Op. cit.*, p. 88.

555 Notes on the Development of a Child, p. 112.

556 *Op. cit.*, pp. 314, 321.

557 See, on the other hand, Preyer's conclusion given below. *Op. cit.*, p. 369.

558 See Ufer's article on Sigismund's Kind und Welt.

559 Jodl calls the root word, which he and others refer neither to interjectional nor imitative origin, ideal roots; I prefer to call them experimental roots.

560 It should be remembered that the appearance of an imitative speech is quite natural in connection with gesture language. We do not know certainly, however, which preceded the other.

561 Lehrbuch der Psychologie, p. 570.

562 See Franz Magnus Boehme, *op. cit.*, p. 218.

563

> "The howling blast through the groaning wood
> Wrenching the giant pine, which, in its fall,
> Crashing sweeps down its neighbouring trunks end boughs,
> While with the hollow noise the hills resound."
>
> *Miss Swanwick's translation.*

564 Gedanken zu einer Aesthetik auf entwickelungsgeschichtlicher Grundlage. Zeitschr. f. Psych. u. Phys. d. Sinnesorgane, vol. xiv (1897).

565 Hall and Allin, Psychology of Tickling, Laughing, etc., pp. 15–17.

566 Miss Shinn reports a kind of animal dance by a child in its third year (*op. cit.*, p. 127).

567 Among the varied decorations which the natives of British New Guinea wear at their holiday dances is the bushy tail, which is placed quite as high as on the antique fauns. See A. C. Haddon, Intern. Arch. f. Ethnogr., vol. xi (1893).

568 Hall and Allin, Psychology of Tickling, Laughing, etc., pp. 15–17.

569 Livingstone's last Journals from Central Africa.

570 Captain Jacobsen's Reise an der Nordwestküste Amerikas, 1881-'83, Leipsic, 1884, p. 85.

571 Signe Rink, Aus dem Leben der Europäer in Grönland, Ausland, vol. lxvi (1893), p. 762.

572 Mental Development, p. 357.

573

> "Time's passage shall unfold for him
> Fortune bright and fortune dim."

574 W. Svoboda, Die Bewohner de Nikobaren-Archipels. Intern. Arch. f. Ethnogr., vol. v (1892).

575 W. Joest, Weltfahrten, Berlin, 1895, vol. ii, p. 162.

576 Pechuël-Loesche's report of a monkey's play with a doll shows that it was mere experimentation (The Play of Animals, p. 169).

577 B. Altum, Der Vogel und sein Leben, Münster, 1895, pp. 188, 189.

578 Mental Development, p. 362 (omitted from the German version).

579 Thus, to mention one example, Marie G—— had no sooner adopted a small thermometer as a baby than she spied the tassel which it hung up by, and called everybody's attention to its lovely head.

580 The Japanese collection in the Berlin Museum is the finest that I have ever seen.

581 See J. Walter Fewkes, Dolls of the Tusayan Indians. Int. Arch. f. Ethnogr., vol. vii (1894). Fewkes is very careful about committing himself on this point.

582 *Op. cit.*, p. 254.

583 Unter den Naturvölkern Central-Brasiliens, p. 230.

584 Ibid.

585 *Op. cit.*, p. 98. See also Sully's Studies, p. 333.

586 *Op. cit.*, p. 195.

587 See on this point Grosse's Anfänge der Kunst and the chapter on The Young Draughtsman in Sully's Studies of Childhood. If space allowed I could give similar particulars of my nephew Max K——'s work. In this boy the artistic impulse all turned to the representation of animals, in which he became a master. He took the great scissors and cut away almost without looking, and with every turn of the shears he turned his body too (an instance of the outer effects of inner imitation).

588 H. T. Lukens, Die Entwickelung beim Zeichnen, Die Kinderfehler, ii (1897).

589 Von den Steinen, Unter den Naturvölkern, p. 235.

590 Unter den Naturvölkern, etc., p. 251.

591 Unter den Naturvölkern, pp. 251, 254, 255, 257.

592 Ibid.

593 Ibid.

594 G. Nachtigal, Sahara und Sudan, Leipsic, 1889, vol. iii, p. 133. See, too, Knabenspiele im dunkeln Welttheil, Deutsche Kolonialzeitung, 1898, No. 42.

595 Conrads Ricci, L'arte dei Bambini, Bologna, 1887. The young Canova, when a kitchen boy, betrayed his talent as a sculptor by moulding a lion in butter.

596 Social and Ethical Interpretations, p. 106.

597 Ibid. pp. 94 ff.

598 B. Perez, L'art et la poésie chez l'enfant, Paris, 1888, p. 200. The self-evident truth that forces the contrary of imitation are also operative in the progress of art is not the proper subject of this investigation.

599 J. Volkelt, Der Symbol-Begriff in der neuesten Aesthetik, Jena, 1876; and P. Stern, Einfädlung und Association in der neueren Aesthetik, Hamburg and Leipsic, 1898.

600 Jouffroy, Cours d'esthétique, Paris, 1845, p. 256.

601 Dr. Lipps, Raumästhetik und geometrisch-optische Täuschungen, Leipsic, 1897, p. 5.

602 See P. Stern, *op. cit.*, p. 46.

603 *Op. cit.*, p. 7.

604 I have dwelt on this point both in my Einleitung in die Aesthetik and in the Spiele der Thiere. Further treatment of it may be found in K. Lange's Künstlerischer Erziehung der deutschen Jugend.

605 Ueber das optische Formgefühl, Stuttgart, 1873.

606 La Beauté plastique. Revue philosophique, vol. xxxv (1893).

607 Studien über die Bewegungsvorstellungen, Wien, 1882.

608 Beauty and Ugliness. Contemporary Review, 1897.

609 A confirmation of this, which is especially valuable because it is not intended as a contribution to æsthetics, is found in Stricker, *op. cit.*, pp. 16, 21, 26.

610 Stricker, *op. cit.*, p. 23. The application to the observation of dancing is self-evident.

611 See Hubert Roetteken, Zur Lehre von den Darstellungsmitteln in der Poesie.

612 See Külpe, Grundriss zur Psychologie, p. 149. Külpe is of the opinion that possibly voluntary recollection is never unaccompanied by movement.

613 Kalligone, Leipsic, 1800, vol. i, p. 116.

614 Mental Development, p. 407.

615 *Op. cit.*, pp. 554, 677.

616 Ibid.

617 For the bearing of this on the doctrine of promiscuity, see the works of Starcke, Westermarck, and Grosse; also P. and Fr. Sarasin, Ergebnisse naturwissenschaftlicher Forschungen auf Ceylon, vol. iii, Wiesbaden, 1892-'93, pp. 363, 458.

618 See G. F. Pfisterer, Pädagogische Psychologie, second edition, Gutersloh, 1889, p. 146.

619 A. Kohler (Der Kindergarten in seinem Wesen dargestellt) says, however, that the child's longing to associate with others of its own age is so strong as to require daily satisfaction (Pfisterer, *op. cit.*, p. 145).

620 Pfisterer, *op. cit.*, p. 147.

621 *Op. cit.*, p. 65.

622 Studies in Childhood, p. 268.

623 Handbuch der praktischen Pädagogik, p. 699.

624 A. Marty finds, as does Whitney, the impulse for communication an essential for the origin of the so much more varied language of men than of animals. Ueber Sprachreflex, Nativismus und absichtliche Sprachbildung. Vierteljahreschr. f. wissensch. Philos., vol. xiv (1890), p. 66.

625 *Op. cit.*, p. 228.

626 Chamberlain, *op. cit.*, pp. 260, 263.

627 Ibid.

628 See F. S. Krauss, Geheime Sprachweisen. Am. Urquell, vol. ii-vi; P. Sartori, Sondersprachen, ibid., vol. v.

629 Social and Ethical Interpretations, p. 148.

630 Æsthetic Principles, New York, 1895, p. 68.

631 Essays, vol. ii, p. 41.

632 The Naturalist in La Plata, p. 227.

633 Social and Ethical Interpretations, p. 238.

634 La Logique sociale. Préface, p. vii. Les Lois de l’Imitation, second edition, p. 215.

635 Social and Ethical Interpretations, p. 243.

636 Gutsmuths, p. 251.

637 Svoboda, Die Bewohner des Nikobaren Archipels, p. 29.

638 W. James, The Principles of Psychology, vol. ii, p. 428.

639 Unter den Naturvölkern, etc., p. 267.

640 J. von d. Steinen, Unter den Naturvölkern, p. 267.

641 *Op. cit.*, p. 219.

642 Das Spiel und die Spiele, p. 328.

643 *Op. cit.*, p. 268.

644 In an inquiry as to children's preferences in the matter of playmates, Will S. Monroe found 335 boys who wanted male against 20 who asked for female comrades; 328 girls preferred their own sex and only 28 the other. (Development of the Social Consciousness of Children. The Northwestern Monthly, September, 1898.)

645 O. Stoll, Suggestion und Hypnotismus in der Völkerpsychologie, Leipsic, 1894, p. 24.

646 A more thorough account of this theory may be found in The Play of Animals. The recreation theory, on the contrary, is peculiarly applicable in this connection.

647 O. Külpe, Grundriss der Psychologie, Leipsic, 1893, p. 216.

648 H. Steinthal, Zu Bibel und Religionsphilosophie, Berlin, 1895, p. 249.

649 The foregoing observations are somewhat modified by Kraepelin's view that active recreation conquers the feeling of fatigue rather than fatigue itself.

650 A. Moll, Der Hypnotismus, third edition, Berlin, 1895, p. 63.

651 The principle of repetition in poetry, too, is sometimes like this. See von Biedermann, Die Wiederholung als Urform der Dichtung bei Goethe. Zeitschrift f. vgl. Literat.-Gesch., vol. iv (1891).

652 Games of chance pre-eminently have this power over adults.

653 Mental Development, p. 132.

654 Souriau, Le plaisir du mouvement, Revue Scientifique, vol. xviii, p. 365.

655 O. Stoll, Suggestion und Hypnotismus in der Völkerpsychologie, p. 129.

656 G. H. Schneider, Der menschliche Wille, Berlin, 1882, p. 68.

657 The Naturalist in La Plata, p. 281.

658 *Op. cit.*, p. 464.

659 Sec F. v. Wagner, Das Problem der Vererbung. Die Aula, 1895.

660 The much-discussed question of telegony seems to me out of place in this connection, for if it actually exists at all it must be effected by some intricate modification in the germ substance itself, and does not concern the inheritance of somatogenic qualities.

661 J. W. Spengel, Zweckmässigkeit und Anpassung, Giessener Rectoratsrede, 1898.

662 G. R. Romanes, Darwin and after Darwin, vol. ii.

663 Baldwin, Organic Selection. Amer. Naturalist, June, July, 1896, and Biolog. Centralblatt, vol. xvii (1897), p. 385. Weismann, Ueber Germinal Selection, Jena, 1896. (Also in English translation.)

664 Baldwin calls this directing influence of organic selection orthoplasy; he attempts to replace Eimer's "orthogenesis" by means of a principle which does not involve the inheritance of acquired characters. [A recent exposition of organic selection is by Conn (Method of Evolution, 1900). See also Baldwin's Dict. of Philos. and Psychol., *sub verbo*.—Tr.]

665 The process is, of course, reversed in degeneration.

666 Weismann insists that individual selection must give the impetus to such specially directed evolution of the germ substance; but it seems to me that his theory can not escape the objection that it lacks proper grounds for selection unless the specially directed variations in the germ substance arise independently of individual selection. It may then be said that even in a quite constant species there are, as a result of germinal selection, dispositions to specially directed variations (the lower jaw of the Hapsburgs, for instance, or the appearance of a specialised genius in a talented family), which, so long as the environment remains constant, very soon meet the opposition of individual selection. But when outer conditions are changed, the useful variations arise again, encounter and finally overcome individual selection. Whether the struggle for existence really plays such a rôle in the germ substance, however, it is difficult to assert with assurance.

667 Ibid.

668 The previous discussion of this question need not be repeated here.

669 R. Sommer, Grundzüge einer Geschichte der deutschen Phys. und Aesth., Würzburg, 1892, pp. 98, 266.

670 Gedanken zu einer Aesthetik auf entwickelungsgeschichtlicher Grundlage. pp. 270, 273.

671 A similar view is expressed in Lange's work.

672 *Op. cit.*, pp. 404, 406.

673 Ibid., p. 411. Here play is called "unconscious imitation necessitated by hereditary impulses." In this notice Wundt refers to my views expressed in The Play of Animals as though to me "the playful fights of dogs with their young appeared earlier in the evolution of species than genuine fighting among animals." But this is not my meaning. I insisted on the presence of hereditary impulses, and assumed that these are brought to perfection during a period of youth devoted to play. Play would, on the whole, contribute more to the weakening of existing instincts than to strengthen them or create new ones.

674 Ibid.

675 I have not made this distinction sufficiently clear in The Play of Animals, as K. Lange rightly points out.

676 See, too, K. Lange, Gedanken zu einer Aesthetik, etc., p. 258.

677 [By "not psychological at all" was meant not psychological semblance (Scheinthätigkeit) at all, while still such from an objective point of view; so that psychological semblance can not be taken as a universal criterion of play.—J. M. B.]

678 Children show conscious self-illusion very clearly when they play something like this: "Now I am playing that I am papa and have shot a lion," etc.

679 Note, however, the rhythmic action of attention, which frequently admits of "coming to" at relatively regular intervals.

680 Lipps's dritten Aesthetischen Litteraturbericht (p. 480) seems to me to state the problem clearly, but does not contribute to its solution.

681 Lange has treated of the contrary case where Nature is regarded as a work of art. I do not think, however, that it has the significance that belongs to the conversion of appearance into reality.

682 "À la vue d'un objet expressif," says Jouffroy, "qui me jette dans un état

sympathique de soi-même désagréable, il y a en moi un plaisir qui résulte de ce que je suis dans cet état."—*Op. cit.*, 270.

683 Raumästhetik, p. 6.

684 *Cf.* Baldwin, Social and Ethical Interpretations, p. 146.

685 Baldwin, *op. cit.*, p. 141.

686 K. A. Schmid, Geschichte der Erziehung, vol. iv, p. 282.

687 Colozza's book on play contains in its second part, Il guoco nella storia della pedagogia, a good historical review of this subject.

688 Moller on Play, in the Encyklopädie des gesammten Erziehungs- und Unterrichtswesens.

689 This Swabian preacher had made a prodigy of his son by this method.

690 K. A. Schmid, Geschichte der Erziehung, vol. iv, pp. 279, 401.

691 See Max Reischle, Das Spielen der Kinder, etc., p. 32.

692 I refer not merely to rivalry, but to the accomplishment of tasks as well.

693 Brough Smith, The Aborigines of Victoria, London, 1878, vol. i, p. 50.

694 Reischle, *op. cit.*, p. 24.

695 See Colozza, *op. cit.*, p. 253.

INDEX

Alix, observation of animals, 123.
Allen, Grant, on beauty, 269.
Allin, play with physical pain, 159;
teasing, 227;
the comic, 280;
imitation of animals, 203.
Altum, on sexual selection, 265;
nursing play, 310.
Amaranthes, swinging, 71;
trials of patience, 102.
Andree, drumming, 46;
recognising pictures, 125;
wagering, 192;
gambling, 210;
indecent drawings, 277.
Anstruther-Thomson, inner imitation, 328, 331.
Arabians, wagering, 208.
Aristotle, catharsis, 163.
Astragalus, 209.
Autenrieth, experimental play, 96.

Bain, imitation, 285.
Baldwin, repetition, 6;
circular reaction, 34;
persistent imitation, 39;
righthandedness, 76;
recognition, 122;
imagination, 136;
imitation, 282–291, 305–321;
nursing play, 311;
self-exhibition, 348;
mass suggestion, 367;
organic selection, 372;
kinds of play, 396.
See also the Editor’s Preface.
Bashkirtseff, the luxury of grief, 161.

Bastian, speech practice, 40;
kite-flying, 97;
throwing at a mark, 114;
gaming, 208;
tensing, 230;
hide-and-seek, 243.
Beauregard, Egyptian caricature, 227.
Berlepsch, throwing play, 106;
ring fighting, 178.
Biederman, repetition in poetry, 367.
Boas, figures in skating, 103.
Böhme, melodies of children's songs, 230;
sound imitation, 298.
Brehm, teasing, 280.
Bridgman, movement play, 76.
Bücher, work and rhythm, 25;
songs of primitive peoples, 35;
origin of instruments, 46.
Büttikofer, plays of women, 192.

Caine, oracles, 207.
Chamberlain, jumping, 85.
Chinese, effect of music, 30;
games, 208;
pitching quoits, 210.
Colozza, hearing ploys, 48;
mental contests, 201;
social plays, 335;
dangers of the imagination, 406.
Compayré, play with taste, 9;
kissing, 12;
voice practice, 31;
constructive play, 100;
playful lying, 142;
play with the reasoning powers, 154;
teasing, 228.
Couturat, imitatation and æsthetic satisfaction, 328.

Curtmann, social influence, 335.

Darwin, art and sexual selection, 18–24;
observation of movement, 164;
the comic, 297.
Daudet, playful lying, 142.
Dickens, imagination, 138.
Dodge, the comic, 279.
Du Bos, intensive stimuli, 163, 383.

Eckstein, fighting play, 190.
Edler, play with taste, 12;
hearing play, 24.
Ellendorf, sight play, 51.
Erdmann, gaming, 214.
Eskimos, ornamentation, 58;
figure-skating, 119.
Eyre, Australian dance, 73.

Fedde, contest in Faust, 179.
Fénelon, play and judgment, 130.
Feuerbach, imagination, 158.
Fewkes, dolls and idols, 312.
Finsch, endurance plays, 102.
Fischart, destructive play, 98;
ball play, 109;
throwing, 114.
Fischer, wit, 158;
on Schopenhauer, 162.
Flashar, social influence, 335.
Forbes, football, 109;
goal plays, 114.
Fouquières, stloppus, 34;
ancient drums, 46;
Athenian feast, 93;
throwing play, 107;
the Gordian knot, 210;

teasing, 222–224;
hide-and-seek, 243.
Fritsch, love play, 259.
Froebel, learning to walk, 82;
kindergarten, 402.

G. Marie, touch sensations, 8;
taste, 15;
hearing play, 22;
poetic efforts, 35–39;
pleasure in colour, 71;
recognition, 125;
exercise of reason, 129;
speech imitation, 296;
dramatic drawing, 318.
Gildemeister, 345.
Goethe, chain rhymes, 37;
hearing plays, 43;
praying to the light, 52;
throwing play, 105;
illusion, 132;
playful lying, 142;
the luxury of grief, 165;
fighting play, 182.
Grasberger, divisions of play, 1–15;
play with insects, 85;
gymnastic play, 85;
hustling things about, 97;
ring games, 114;
blind-man’s-buff, 128;
hunting play, 240.
Grey, 229.
Grosse, primitive poetry, 35;
instruments, 44;
critique of Bücher, 47;
display in the dance, 73;
rhythm, 89;

stories of Eskimos, 142;
mental rivalry, 202;
derisive songs, 229;
primitive pictures, 315;
dance feasts, 354.
Gurney, enjoyment of music in children, 20;
hearing play, 23.
Gutsmuth, throwing plays, 107;
teasing, 224.
Gutzmann, voice practice among children, 31–33.
Guyau, pleasure in warmth, 14;
in pleasant odours, 17;
playful lying, 142;
theory of play, 388.

Hall, taste, 8;
play with physical pain, 159;
cruelty, 233;
teasing, 288;
the comic, 280;
imitation of animals, 203.
Hanslick, pleasure in music, 27.
Hartmann, endurance play, 103;
rivalry, 182;
betting, 206;
lottery, 208;
apparent and real I, 388.
Hecker, the comic, 165.
Hellenes, drumming, 44;
gymnastic play, 85;
Livingston, 93;
hustling things about, 97;
board plays, 204;
betting, 206.
Helmholtz, 129.
Herbart, the child as a plaything, 403.
Hudson, impulse for contact, 286;

mass play by birds, 346;
Lamarckian principle, 361.
Hugo, 17;
enjoyment of the grotesque, 167.

Ibsen, J. G. Borkmann, 82;
tragedy, 146.
Indian, 182;
games of chance, 208.

Jacobson, Indian child feast, 304.
James, reverence for light, 52;
collective impulse, 100;
desire for knowledge, 147;
hunting impulse, 240;
social play, 352.
Jean Paul, social play, 396.
Jodl, sensory impulses, 3;
teasing, 222;
decapitation, 309.
Johnson, taste play, 11;
hearing play, 34.
Jouffroy, inner imitation, 328.

Kant, colour perception, 60;
the comic, 165.
Kaufmann, recognition in poetry, 127.
Keller, pleasure in colour, 72;
destructive play, 98;
love play, 255.
Kleist, the luxury of grief, 161.
Klutschak, skating figures, 103.
Köhler, the social sense in little children, 335.
Köstlin, tone, 28.
Kraepelin, rhyming, 38;
sensation in play, 74.
Kraus, 343.

Kries, practice of the will, 172.
Külpe, 365;
the reasoning powers, 329.
Kussmaul, taste in the infant, 14.

Lange, conscious self-deception, 130;
value of illusion, 300;
aim in play, 379.
Lazarus, struggle with danger and difficulty, 174;
card games, 195;
recreation theory, 364;
rivalry, 190.
Lee, æsthetic observation, 328.
Legras, movement play, 78.
Lenz, climbing impulse, 87.
Lessing, pleasure in strong excitement, 14;
pleasure in learning, 130;
effect of the tragic, 163;
the task of poetry, 383.
Lewes, attention, 145.
Linde, chess games, 193.
Lindley, logical experimentation, 154.
Lippert, ecstatic condition, 25.
Lipps, the comic, 165;
charm of forbidden fruit, 287;
the Doric column, 323;
æsthetic illusion, 388.
Livingstone, imitative play, 304.
Lombroso, imagination, 140;
impulse to opposition, 187;
destructiveness, 218.
Lotze, 129.
Lubbock, reduplication, 88.
Lukens, children’s drawings, 316.

Mantegazza, love play, 266.
Marcano, caricature, 227.

Marshall, art instinct, 345.
Marty, speech and sympathy, 341.
Meumann, rhythm, 35.
Mexico, 208.
Meyer, E. H., teasing, 230.
Meyer, R. M., refrain, 35, 127.
Mill, J., imitative impulse, 285.
Minor, imitation, 127.
Mörike, touch sensations, 13;
sight play, 52.
Moll, repetition in hypnosis, 367.
Moller, on play, 399.
Monroe, comradeship and sex, 356.
Morgan, Lloyd, organic selection, 294.
Munkacsy, collective impulse, 101.

Nachtigal, plastic production by children, 320.
Nansen, sight play, 51;
leaping, 85;
curiosity, 147.
Necker de Saussure, destructive impulse, 218;
social sense in children, 335.
Niebuhr, ball play, 113.
Nietzsche, intoxication and art, 24;
tragedy, 252;
low ideals, 90.
Nordenskiold, throwing play, 115.

Parkinson, swinging, 93;
throwing play, 107;
catching, 119;
wagering, 206.
Perez, touch sensations, 6–11;
smell, 15;
hearing, 20, 22, 41;
hustling things about, 96;
playful lying, 142;

curiosity, 157;
teasing imitation, 227, 291;
imitation of self, 322.
Petermann, 192;
gaming, 209.
Pfänder, movement and will, 285.
Pfisterer, social sense in children, 335.
Pilo, smoking, 17;
the comic, 238.
Plischke, reason play, 191.
Ploss, hearing play, 41;
rocking, 93;
throwing, 109;
teasing, 225.
Preyer, touch sensations, 6;
hearing play, 41;
sensations of brightness, 50;
perception of movement, 75;
learning to walk, 81;
dancing, 89;
constructive play, 100;
throwing, 103;
recognition, 123;
attention, 147;
imitation, 291.

Rabelais, throwing play, 145;
satire, 228.
Raehlmann, sight play, 48;
sounding, 50.
Raydt, boxing, 180.
Reischel, prehistoric drums, 45;
play and character building, 400.
Ribot, instinct, 34;
gaming, 210;
play with physical pain, 160;
luxury of grief, 162;

the comic, 230;
pleasure in the tragic, 248.
Ricci, plastic art among children, 320.
Richepin, sympathy between artists, 345.
Richter, A., 114.
Richter, W., fisticuff, 180;
gaming, 209.
Rochholz, children's rhymes, 39;
hustling things about, 97;
throwing play, 114;
finger play, 170;
gaming, 208.
Rötteken, pleasure in strong emotion, 163;
poetic enjoyment, 330.
Romanes, play with temperature sensations, 14, 51;
endurance play, 102;
throwing, 181;
instinct, 372.
Rousseau, meaning of youth, 121.
Rudeck, self-exhibition, 263.
Rückert, riddle contest, 190.

Sand, fear, 166;
imaginative play, 406.
Scaino, football, 108.
Schaller, chance games, 193–204;
card games, 194;
wagering, 213.
Schellong, hearing play, 43.
Schiller, dancing, 89;
superfluous energy, 339;
courage, 392.
Schliemann, Trojan instruments, 46.
Schneegan, teasing, 222.
Schneider, the hunting impulse, 230;
Lamarckian principle, 370.
Scholz, destructive impulse, 220.

Schopenhauer, effect of rhythm, 25–28;
power and will, 384.
Schultz, hearing play, 46;
fighting play, 186–201;
seeking, 244.
Schuster, 204, 205;
gaming, 191–211.
Schweinfurth, throwing play, 114.
Seidel, riddles, 157;
animal stories, 205.
Selenka, singing apes, 19;
rhythmical movement, 89.
Semon, play with taste, 16;
hunting play, 238.
Semper, imitative dancing, 312.
Shinn, hearing, 21;
recognition, 125;
imitation, 295;
dancing by children, 302;
drawing, 314.
Siebeck, musical enjoyment, 28.
Sighele, destructive impulse, 220.
Sigismund, rhythm, 20;
sight play, 50;
learning to walk, 80;
hustling things about, 96;
throwing, 104;
recognition, 123;
teasing, 225;
imitation, 294.
Sikorski, sense of taste, 9;
recognition, 123;
attention, 145.
Sittl, teasing, 231.
Slatin, cruelty, 225.
Smyth, Brough, 402.
Sommer, 377.

Souriau, æsthetics and suggestion, 24;
illusion, 131;
pleasure in movement, 93, 361;
throwing, 104;
fear, 166.
Spencer, superfluous energy, 362;
art and sexual selection, 18;
rhythm, 89;
curiosity, 148.
Spengel, Lamarckian principle, 372.
Spinoza, rivalry, 197.
Steinen, v. d., swinging, 93;
hustling things about, 97;
recognition, 125;
curiosity, 147;
ring fighting, 176;
the comic, 274;
origin of drawing, 314;
beginnings of plastic art, 42;
dancing, 353;
exclusion of women from feasts, 355.
Steinthal, recreation, 365.
Stern, L. W., perception of movement, 145.
Stern, P., sympathy and association, 325.
Sticker, righthandedness, 76.
Stöckel, the nude in art, 276.
Stoll, hypnotism, 25;
dancing dervishes, 369.
Stricker, inner imitation, 329.
Strümpell, touch sensations, 8;
hearing play, 41;
endurance play, 102;
counting, 136.
Strutt, old English snowshoeing, 95;
endurance play, 102;
ball play, 120;
fighting play, 185;

hunting impulse, 238.
Stumpf, a prodigy, 129.
Sully, hearing play, 20, 41;
recognition, 123;
memory, 128;
playful lying, 142;
fear, 167;
opposition, 186;
the comic, 230;
voluntary submission, 338.
Svoboda, fighting play, 182;
play of children, 397;
dancing, 350.

Tarde, imitation and repetition, 282;
obedience as imitation, 348.
Tiedemann, curiosity, 150.
Töllner, on play, 398.
Tracy, beginnings of imitation, 291.
Tylor, backgammon, 194;
wagering and soothsaying, 207, 208;
counting games, 210;
drawing by deaf-mutes, 230.

Vierordt, movement in children, 75;
righthandedness, 76.
Vischer, 279;
inner imitation, 328.
Volkett, enjoyment of tragedy, 246;
inner sympathy, 322.

Wagner, F. v., Lamarckian principle, 372.
Wagner, H., top spinning, 111;
ball games, 120;
experimentation, 169.
Wagner, L., shipwreck, 222;
April fool, 225.

Wagner, R., recognition, 126.
Wallaschek, rhythm and melody, 26;
critique of Spencer, 29.
Weinhold, K., leaping play, 86;
dancing, 89;
snowshoeing, 95;
throwing play, 181, 203;
gaming, 186, 191.
Weismann, germinal selection, 373.
Werner, poetic rivalry, 189.
Westermarck, courtship contest, 263.
Wetz, province of the drama, 247.
Wölfflin, touch sensations, 10.
Wünsche, betting among the Arabians, 208.
Wundt, love plays, 253;
eye movements, 328;
criterion of play, 379.

Zettler, tests of strength, 178.
Zingerle, sense of taste, 9;
chain rhymes, 36;
sight plays, 50.
Zola, 136.

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